

Draft Final

Field Report, 2022 Spring Field Event

Remedial Investigation

**GOULD ISLAND
Narragansett Bay
Jamestown, Rhode Island**

FUDS No. D01RI033800

July 2022

**Prepared for:
U.S. Army Corps of Engineers
New England District
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**Contract W912WJ-19-D-0007
Task Order W912WJ-22-F-0041**



**US Army Corps
of Engineers®**

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LIST OF ACRONYMS

AOC – area of concern
Alpha – Alpha Analytical, Inc.
APP – Accident Prevention Plan
ARA – Absolute Resource Associates
BD/DR – Building Demolition and Debris Removal
bgs – below ground surface
CENAE – Corps of Engineers New England District
COC – chain of custody
COI – constituent of interest
COPC – contaminant of potential concern
Credeire – Credeire Associates, LLC
CSM – conceptual site model
DQCR – Daily Quality Control Report
DU – decision unit
EMI – environmental measurement
eQAPP – electronic QAPP
FUDS – Formerly Used Defense Sites
FUDSChem – Formerly Used Defense Sites Online Chemical Database
GNSS – Global Navigation Satellite Systems
GPS – global positioning system
GW – groundwater
GWD- groundwater level elevations
HHRA – human health risk assessment
ISM – incremental sampling methodology
LDI – location definition information (in FUDSChem)
LNAPL – light non-aqueous phase liquid
LTD – lithologic descriptions (in FUDSChem)
mL – milliliter
NAPL – non-aqueous phase liquid
NAVD 88 – North American Vertical Datum 1988
NEG – New England Geotech
NED – New England District
OSHA – Occupational Safety and Health Administration
PAL – project action level
PCB – polychlorinated biphenyl
PDT – Project Delivery Team
PID – photoionization detector
ppm – parts per million
PWS – Performance Work Statement
QA – quality assurance
QAPP – Quality Assurance Project Plan
QC – quality control
QCM – quality control manager

RI – Remedial Investigation
RIDEM – Rhode Island Department of Environmental Management
Site – Gould Island, Jamestown, Rhode Island
SLERA – screening level ecological risk assessment
SLX – site location cross reference (in FUDSChem)
SOP – standard operating procedure
SOW – scope of work
SU – sampling unit
UCL – upper confidence limit
U.S. – United States
USACE – U.S. Army Corps of Engineers
USCS – Unified Soil Classification System
USGS – U.S. Geological Survey
UST – underground storage tank
WCI – well completion information
WINT – well construction intervals
VOC – volatile organic compound
VPH – volatile petroleum hydrocarbons

1. INTRODUCTION

Credere Associates, LLC (Credere) was retained by the United States (U.S.) Army Corps of Engineers (USACE) New England District (CENAE) to conduct a Remedial Investigation (RI) of Gould Island located in Narragansett Bay in Jamestown, Newport County, Rhode Island (Site). A Site Location Plan is provided as **Figure 1**, and a Detailed Site Plan is provided as **Figure 2**.

The scope of the field investigations for the Spring 2022 field program is detailed in the associated Quality Assurance Project Plan (QAPP), Addendum No. 4 (Credere, 2022c). This QAPP Addendum amends and updates the original 2018 QAPP for the Site prepared by Credere as well as the following preceding addendums:

- RI QAPP, April 16, 2018 (Credere, 2018a)
- RI QAPP for Demolition, Debris Removal, and Underground Storage Tank (UST) Removal, Addendum No. 1, February 22, 2019 (Credere, 2019)
- RI QAPP, Revision No. 1, March 26, 2020 (Credere, 2020a)
- Building Demolition and Debris Removal (BD/DR) QAPP Addendum No. 2, August 9, 2021 (Credere, 2021b)
- BD/DR QAPP, UST Removal, Addendum No. 3, January 2022 (Credere, 2022a)

The March 26, 2020, QAPP Revision No. 1 served as the primary prior reference for previously approved information throughout the 2022 QAPP Addendum No. 4 because it is the most recent and complete QAPP relative to the scope of work herein. The 2022 QAPP Addendum No. 4 was developed in accordance with the Performance Work Statement (PWS) prepared by CENAE dated January 31, 2022 (CENAE, 2022). Credere serves as the prime contractor for the project with subcontractors serving supporting roles (e.g., drilling, survey, laboratory). The 2018 Accident Prevention Plan (APP) was updated with a change of document addendum (Credere, 2022d).

This RI Field Report summarizes field investigation activities performed in Spring 2022 (between March 30 and April 15, 2022) and groundwater sampling performed on April 26, 2022 (collectively referred to as the 2022 Spring Field Event). Preliminary RI field work was completed between February and April 2018 (documented in the September 24, 2018, RI Field Report [Credere, 2018b]) and throughout 2020 (documented in the February 2022 Draft Final RI Field Report [Credere, 2022b]). This report provides documentation of the 2022 Spring Field Event. This report outlines the project and field objectives, summarizes the methodologies implemented in the field, specifically documents deviations or significant observations, and outlines the data management methodologies utilized. Laboratory analytical results and the data validation are not included herein and will be submitted as part of a subsequent RI Data Report and Data Gap Assessment.

1.1 PROJECT AND SITE DESCRIPTION

The project includes assessment of potential source areas across the Formerly Used Defense Site (FUDS) eligible portion of Gould Island. This Site was the U.S. Navy's primary testing facility

for torpedoes during World War II. In the 1950s, testing and production of torpedoes was outsourced to private contractors, and in 1975 and 1989, parcels were transferred to the State of Rhode Island to form the current Site. The Site has been generally abandoned since and has become heavily overgrown with vegetation. Many of the remaining structures that were in dilapidated condition have since been removed including the boiler house and bunkers in 2019 and torpedo building, degaussing building, maintenance building and fire station in fall 2021.

The 39.15-acre Site is the central and southern portion of Gould Island that is currently managed by the Rhode Island Department of Environmental Management (RIDEM) Division of Fish & Wildlife and is designated as a bird sanctuary. Island access is restricted during bird nesting between April 1st and August 15th annually. The 16.9-acre remainder of the island to the north is owned by the U.S. Navy. The Navy and U.S. Coast Guard have several small easements on the Site that are not eligible under the FUDS program and, as such, were not subject to investigation. These areas are hashed in green on **Figure 2**.

Potential areas of concern (AOCs) on the Site were identified through review of prior environmental reports, munitions response reports, and historical information. These findings are summarized in the Final Preliminary Technical Memorandum (Credere, 2017). Preliminary RI field work was completed between February and April 2018 (Credere, 2018b) and throughout 2020 (Credere, 2022b). Using the results of the previous phases of the RI, a preliminary comparison of results to project action levels (PALs) to identify preliminary constituent of interest (COIs) was conducted. This preliminary comparison identified several of the assessed New England District (NED) areas of concern as having concentrations of contaminants exceeding screening levels (Credere, 2020b; Credere, 2021a). Additionally, as several areas sampled in Spring 2020 indicated elevated concentration on the boundaries of NEDs or newly identified areas of contamination, delineation of the horizontal and vertical extent of these areas remained a data gap.

1.2 STATEMENT OF OBJECTIVES

The primary overall objective of the RI field activities is to collect sufficient analytical data to support a comprehensive conceptual site model (CSM) and associated human health risk assessment (HHRA)/screening level ecological risk assessment (SLERA) to evaluate the need for remedial action at the Site. The sampling completed between February and April 2018 and throughout 2020 identified several areas where contaminants exceed risk-based screening levels, indicating potential risk to human health or the environment. Additionally, several unassessed areas were identified during BD/DR activities in fall 2021. Based on the prior 2018 and 2020 investigation and 2021 observation, the following NED Sites warranted additional investigation to identify the extent of contamination and/or to quantify potential risks:

- NED Site No. 1 Coal Storage North (two ancillary areas generally outside the primary coal storage area: 01SS-4 and 01SB-14)
- NED Site No. 10 Disposal Area #14
- NED Site No. 11 Quonset Hut Site
- NED Site No. 12 Maintenance Building & Fire Station

- NED Site No. 13 Substation/Transformer Pen
- NED Site No. 36 Degaussing Building and NED Site No. 38 Torpedo Storage #10 (assessed as one)
- NED Site No. 50 Switch Building
- Additional sitewide outfalls

The following is a summary of generalized objectives for this field investigation. Specific objectives relative to each NED can be found in Appendix A of the QAPP:

- Further characterize NED sites with exceedances of screening criteria to assess contaminant extent and/or quantify risks to potential receptors (NED 01, NED 10, NED 12, NED 13, NED 36/38)
- Confirm the presence of petroleum constituents previously observed at 01SB14
- Assess the presence or absence of a release to the environment from the NED 50 Switch House where a confirmed release of polychlorinated biphenyls (PCBs) to the building interior was previously confirmed.
- Assess contaminant/petroleum presence or absence in groundwater downgradient of NED 11
- Assess the presence or absence of contaminants at additional outfalls

A preliminary screening of the data from this phase of field work will be performed when data is received and validated by comparing results to lowest of identified risk-based PALs along with the data from the initial field efforts in 2018 and 2020 (summarized in the initial RI Field Report (Credere, 2018b) and Draft-Final version of the RI Field Report, 2020 Field Events (Credere, 2022b)). The purpose of the screening will be to refine the COIs assessed in the RI by the preliminary identification of contaminants of potential concern (COPCs) based on concentrations, distribution, and frequency of detection and to assess if a complete data set for the RI has been established. This data evaluation will be completed with input from the project delivery team (PDT) and will be reported under separate cover.

2. FIELD ACTIVITIES AND METHODS

This section summarizes field activities, methods, and any significant deviations from the QAPP and associated standard operating procedures (SOPs) used during the investigation. Photographs of pertinent Site observations and Site conditions are included as **Appendix A**. Field activity sample locations and pertinent Site features are provided on **Figures 3 through 10**.

2.1 FIELD SCHEDULE

The following table summarizes the weekly schedule for all major field tasks during the 2022 Spring Field Event:

Work Week	Site Clearing	Soil Borings	ISM & Surface Soil	Outfall Sampling	GPS/Site Survey	GW Sampling
Mar 28	X					
Apr 4	X	X	X	X	X	
Apr 11			X	X	X	
Apr 25						X

ISM – incremental sampling methodology

GPS – global positioning system

GW – groundwater

Daily marine transport of field personnel and small equipment between Gould Island and Newport, Rhode Island, was provided by Dresser Marine of Middletown, Rhode Island, using a landing craft licensed for transporting up to six (6) passengers at a time plus up to two (2) crew members. Transport for vehicles and heavy equipment was provided by A&R Marine Service of North Kingstown, Rhode Island, using an LCM 8 landing craft with a 40-foot long by 15-foot wide cargo deck.

During the field program, there were two (2) days when work was cancelled due to weather (a combination of rough seas, wind, and heavy rain): March 31 and April 1, 2022. No other half days or reduced workdays due to weather were required. The Dresser Marine licensed captain was responsible for determining weather conditions affecting vessel safety.

2.2 SITE CLEARING & SUPPLEMENTAL EQUIPMENT WORK

Initial Site clearing and reconnaissance of the Site for the proposed scope of work (SOW) was performed by Credere and Dresser Marine on March 30, 2022, at the initiation of the RI field investigation. Clearing continued the following week during drilling activities. Brush clearing was completed via chainsaws and a Bobcat-mounted brush hog (i.e., mower deck). Dresser Marine crew have Occupational Safety and Health Administration (OSHA) 30-hour Construction training.

Specific areas that were cleared include the following:

- NED Site 01 (partial) to allow for ISM sampling and access to the prior 01SB14 location

- NED Site 10 in the new decision unit (DU) to allow for ISM sampling
- NED Site 11 to allow drill rig access to the new well locations
- NED 13 to access the perimeter of the transformer pen fence
- NED Site 38 Torpedo Building and surrounding NED Site 36 Degaussing Building to allow for ISM sampling
- Minor clearing in other NEDs to allow access for prior sample location survey

Deviations

No deviations to the clearing program occurred.

2.3 SOIL BORING ADVANCEMENT & DISCRETE SOIL SAMPLING

During the week of April 4 through April 8, 2022, New England Geotech (NEG) of Jamestown, Rhode Island, performed direct-push soil borings. Overburden borings were advanced using direct-push drilling methods with a Geoprobe® 7822DT track mounted drill rig equipped with a macrocore sampling device. The soil borings were advanced to refusal or to a maximum boring target depth based on the target sample depth. Borings during prior investigations were advanced to refusal in all areas of the Site; therefore, the overburden thickness in each NED area is well established. The one exception is NED 50 where borings to refusal were intentionally not attempted since the objective was to advance angled borings to a depth sufficient to sample under the building foundation. Refusal depths in adjoining NED 49 and NED 12 can be used to estimate bedrock/refusal depth at NED 50.

Soil cores were collected continuously using dedicated, disposable polyethylene liners. Macrocores were individually logged according to a modified Burmister and Unified Soil Classification System (USCS) method in accordance with Credere SOP CA-4. For each core section collected, evidence of contamination was noted, if present, and the soil was initially field screened along the open macrocore length to select locations for headspace field screening. Soil was screened according to Credere SOP CA-7 for total volatile organic compounds (VOCs) using a calibrated ppbRAE 3000 photoionization detector (PID; 10 parts per million [ppm] isobutylene gas standard with a response factor of 1.0). Soil boring logs for each location are presented in **Appendix B**. Notable observations that directed sampling decisions are summarized in **Table 1**, if applicable.

Four borings at NED 50 Switch House were advanced at a 30-degree angle, which is the maximum angle permitted by the drilling equipment. The remaining dimensions were determined considering the measured depth of the foundation basement pit within the Switch House (10 feet below ground surface [bgs]). Therefore, the boring distance from the building and advancement depth were calculated to target soil just below the pit.

Grab soil samples were collected in accordance with Credere SOP CA-5 per target depth interval and rationale detailed in **Table 1**. Generally, sample target depths were pre-determined based on the CSM or previous Site information or targeted the greatest observed contamination. Discrete

soil samples were collected from soil borings primarily for vertical delineation of the extent of surficial contamination (i.e., ISM samples) in most NED sites sampled during this event. A subset of discrete samples in some borings was intended to target certain contaminants of interest (mainly petroleum and PCBs) at depth or to construct vertical profiles. These discrete soil samples will be used to assess potential or residual source material as well as nature and extent of contamination.

Visible asphalt and road base materials, landscaping materials, and other organic detritus was removed prior to sampling. When representative soil was collected, samplers donned new nitrile gloves and used decontaminated hand tools (e.g., stainless steel spoon or spade). To minimize loss of volatiles, volatile petroleum hydrocarbon (VPH)/VOC samples were collected directly from the GeoProbe[®] macrocore using a dedicated soil syringe immediately after exposure to the atmosphere and determination of the appropriate sample collection depth. The remaining representative soil was placed in a decontaminated stainless-steel bowl (see decontamination SOP CA-2), homogenized, and placed in laboratory provided glassware. Samples were stored in coolers on ice until transfer to the laboratory for analyses detailed in **Table 1**. Discrete samples were submitted to Absolute Resource Associates of Portsmouth, New Hampshire (ARA) for analysis. All 28 planned borings were completed.

Excess soil from soil borings was returned to its place of origin within the borehole or surrounding the borehole at the surface and holes were filled to the surface with sand. No investigation derived waste was generated that would require management according to RIDEM rules (RIDEM, 2011, 2022a, 2022b) during this field program.

Deviations from QAPP

Table 1 notes any deviations from the QAPP for each NED Site, sample location, and sample ID, as well as pertinent observations. Deviations from the soil boring program include the following:

- The target sample depth for the deeper soil sample at soil boring 12SB8 was to be collected below the first sample and below evidence of contamination. This sample design assumed the petroleum sludge sample in the sump would be the first target depth based on the previously observed contamination and that evidence of contamination would decrease with depth away from the sludge in the sump. However, elevated PID readings (less than 10 ppm, but above ambient readings) increased with depth below the sump with the highest PID readings (9.9 ppm) obtained in the 3 feet above boring refusal. Therefore, since a sample below evidence of contamination could not be obtained for the boring due to contamination extending to refusal. The sample was reassigned to assess the deeper depth of greatest contamination at a relatively high PID response and petroleum odor. This sample will still be used to understand the nature and vertical extent of petroleum near the maintenance building. Since the original target depth would not have vertically delineated contaminants below the sump, this adjustment is considered an improvement on the end usability of the sample data.

2.4 OVERBURDEN MONITORING WELL INSTALLATION

Two soil borings were completed as monitoring wells at NED 11: 11OBMW1 and 11OBMW2. Based on the known seasonal presence of water at the nearby NED 12, the bottom of the monitoring well screens were set just above or at bedrock refusal to maximize the chance of intercepting groundwater when present during the year. During installation, soil boring samples indicated the presence of “wet” to “moist” fine sand and silt containing some fine gravel.

Monitoring wells were installed according to Credere SOP CA-8. Each overburden monitoring well was constructed in a new boring adjacent to the initial direct push boring by advancing a 3.25-inch casing (direct push) to allow for installation of adequate well materials. Each well was constructed with 10 feet of 2-inch diameter 0.010-inch slotted PVC screen with at least 7 feet of screen below the depth of the water table where possible to allow for groundwater table fluctuations and leave room at the top of the screen to capture possible light non-aqueous phase liquids (LNAPL), and enough solid PVC riser to reach the ground surface. Each well annulus was filled with No. 00 washed silica sand, and a 2-foot bentonite seal was installed 1 foot above each screen. Each well was finished with a standpipe cemented in-place, locking cap, and lock.

Well construction diagrams are provided in **Appendix B. Table 2** provides a summary of well depth, screen interval, depth to water (from two synoptic water level measurements), northing/easting coordinates, and elevations for ground surface, riser, and casing.

Monitoring wells were developed by over pumping with a Whale[®] submersible pump while manually surging/agitating along the length of the screen to bring the screen and filter pack into hydraulic communication with the overburden aquifer, and then to evacuate sediment from the well. The wells repeatedly ran dry during development and were allowed to recharge, were surged at full water column with the pump, and were evacuated three times for a total purge of three well volumes. During submersible pump purging, turbidity was monitored using a Hach turbidity meter but was visually turbid throughout development. Well development details are provided on the well construction logs in **Appendix B**. Lack of free-flowing water into the well (recharge) does limit effectiveness of development and although turbidity remained high, experience at the Site indicated the fines would settle and would produce water quality with acceptable turbidity upon later sampling.

Deviations from QAPP

No deviations from the QAPP occurred during the overburden monitoring well installation.

2.5 ISM AND SURFACE SOIL SAMPLING

Incremental Sampling

DUs for ISM collection are depicted on **Figures 3 through 9**. **Table 1** summarizes each sample collected and the corresponding analyses. ISM soil sampling logs along with soil descriptions are included as **Appendix C**.

ISM samples will be used to assess surface soil, which is considered the primary exposure media for both human and ecological receptors. Certain DUs were sampled using three replicates each representing the entire DU (sampling unit [SU] equals the DU). Additionally, several DUs were sampled using single samples collected from at least three SUs that make up a DU. With this method of partitioning a DU with three SUs, if the DU fails the decision criterion (e.g., has a 95% upper confidence limit [UCL] concentration above a given soil action limit), information will be available to indicate whether the problem exists across the DU or is confined to a certain SU. By subdividing these DUs, some information on heterogeneity in contaminant concentrations across the DUs can be obtained and the spatial results between DU may provide added detail to assess nature and extent.

Incremental sampling DUs, their size, and number of increments were based on prior sampling methodology and results from Spring 2018 and 2020. DU boundaries were mapped in the field using a GPS receiver and base map. Centroid points were surveyed in the field according to **Section 2.8**. During the Spring 2022 field investigation, a total of six DUs and 20 ISM samples were collected.

Incremental sampling was completed between April 7 and 11, 2022, in accordance with Credere SOP CA-26. Increments were collected at each location using an open-slot alligator probe sampler to take a 0.5-inch core in the top 1 foot of soil, which was then extruded into a dedicated 1-gallon resealable bag. Increments were collected in a systematic random grid pattern. Once the respective number of increments was collected (i.e., 30 aliquots), the bag was sealed and double-bagged. One DU was sampled for analysis of VOCs by using a dedicated soil syringe to collect 30 5-gram increments and extruded directly into a wide mouth 1-liter amber container laboratory preserved with 150 milliliters (mL) of methanol.

Once collected, the ISM samples were placed on ice in a cooler until transferred to ARA for further ISM processing and analysis per the QAPP. ARA performed ISM processing including drying and slab cake subsampling to remain consistent with prior rounds of sampling in accordance with SOP QA-801 and the appropriate analytical volume was produced from this method for analysis. Subsample were then analyzed by ARA or transferred to Alpha Analytical of Westborough, Massachusetts (Alpha) for analysis according to **Table 1**.

Surface Soil Sampling

During the week of April 4, 2022, surface soil samples were collected from NED 12 according to Credere SOP CA-5 from depths listed in **Table 1**. Visible asphalt and base materials, landscaping materials, and other organic detritus were removed prior to sampling. These three samples (shown on **Figure 3** as 12SS-6, 12SS-7, and 12SS-8) were collected from the small trench where prior soil samples (shown on **Figure 3** as 12SS-1 through 12SS-5) indicated the presence of PCBs during the BD/DR at NED 12.

In all surface soil samples, representative soil was collected using decontaminated hand tools (e.g., stainless steel spoon or spade) into a decontaminated stainless-steel bowl, characterized, homogenized, and placed in laboratory provided glassware. In total, three surface soil samples

were collected for analysis. Samples were submitted to ARA for analysis. Sample analyses, analytical methods, and pertinent field observations are summarized in **Table 1**.

Deviations from QAPP

No deviations to the ISM or surface soil sampling program occurred.

2.6 OUTFALL SAMPLING

Between April 7 and April 11, 2022, outfall samples were collected from the surface soil/sediment at the observable termination point of the identified outfalls and in accordance with Credere SOP CA-5 from the depths listed in **Table 1**. Outfall locations are shown on **Figures 3 through 5 and 7**. Of the outfalls, OF-9, OF-10 and OF-15 were collected from sandy soil/sediment along the beach that was exposed during low tide (i.e., and may be submerged during high tides). These samples may be considered either soil or sediment since they are within the intertidal zone and intertidal zones can contain subaqueous soils that support submerged aquatic vegetation. OF-11, OF-12, OF-13, and OF-14 were collected from outfall terminuses that were submerged below low tide (mean low water) at all times during the sampling program (i.e., would be considered subtidal sediment).

In all outfall samples, representative intertidal soil/sediment and subtidal sediment was collected using decontaminated hand tools (e.g., stainless steel spoon or spade). VPH/VOC samples were taken directly from the surface from non-submerged freshly exposed material using a dedicated soil syringe to prevent loss of volatiles and degradation. The remaining representative soil/sediment was collected with hand tools into a decontaminated stainless-steel bowl, characterized, homogenized, and placed in laboratory provided glassware. In total, seven new outfall soil/sediment samples were collected for analysis to add to the eight outfall samples collected during previous investigations. Samples were submitted to ARA for analysis. Sample analyses, analytical methods, and pertinent field observations are summarized in **Table 1**. Soil/sediment description logs are provided in **Appendix C**.

Deviations from QAPP

No deviations from the QAPP occurred during the outfall sampling.

2.7 OTHER GENERAL SITE OBSERVATIONS

During execution of the above activities, other general Site observations were routinely made but would not have bearing or significance on the results of the work that was executed with the following exceptions:

- Coal clinker was observed beneath the foundation of the Maintenance Building/Fire Station. Such materials have historically been observed beneath other foundations and appears to have been a practice common to the period on the island when construction occurred.

- Visual indications of petroleum at Coal Storage North, soil boring 01SB14R were not observed during boring advancement and soil characterization. The boring was installed approximately 3 feet northeast of the original location based on the original pin flag located there. The original visual observations were therefore not confirmed.
- A small pile of transite siding was observed, obscured by dense vegetation, approximately 50 feet east of the northeast corner of the Fire Station. A photo of this area is provided in the Photo Log for the April 26, 2022, DQCR, included in **Appendix E**.

2.8 SITE SURVEY

A high-resolution GPS survey was conducted by DiPrete Engineering on April 7, 8, and 11, 2022, to establish reference coordinates for map generation. These included select boring locations, building/foundation corners, and the existing U.S. Geological Survey (USGS) geodetic benchmark. Collected survey points were delivered to Credere in Excel and AutoCAD format and will be uploaded to the FUDS Chemical Database (FUDSChem). All coordinates were georeferenced to North American Vertical Datum 1988 (North American Vertical Datum [NAVD] 88) and Universal Transverse Mercator coordinate systems. This survey collected horizontal and vertical location of all new sample locations as well as prior sample locations from 2020 that were not completed in 2020 due to delays related to COVID-19. The prior Site survey was also attempted in Summer 2020 and was limited by extensive underbrush growth.

Prior to survey, sample locations and pertinent Site features were field located with a Trimble R2 Global Navigation Satellite Systems (GNSS) receiver. The Trimble operates Terrasync version 5.90 software released May 2018. The GNSS receiver was enabled with real-time corrections to attain sub-foot accuracy. Location data for additional sample locations or field adjusted sample locations were collected by DiPrete using their GPS system.

2.9 GROUNDWATER SAMPLING

Groundwater samples were collected on April 26, 2022, from three existing monitoring wells (two overburden wells and one bedrock well) installed during the Spring 2018 field event and the two newly installed 11OBMW overburden wells. Well locations are depicted on **Figure 10**.

Generally, historical groundwater results were below applicable screening levels during the Spring 2018 sampling event for NED 12. However, a second round of confirmatory groundwater sampling from the two NED 12 wells was not obtained in the fall 2020 sampling event due to dry (drought) conditions. Therefore, due to their proximity to NED 11, these wells (12OBMW1 and 12OBMW2) were gauged to assess groundwater elevations to interpret flow direction, if feasible, and sampled to confirm the prior analytical results from Spring 2018. Bedrock well BRMW-4 was also gauged and sampled due to its proximity to NED-11 and to provide additional synoptic data in support of this NED 11 groundwater evaluation. A total of 5 monitoring wells were sampled.

Depth to groundwater was measured with an interface probe relative to the top of well (i.e., top of PVC riser,) for calculation of relative groundwater elevations and estimation of groundwater flow

direction. Gauging was completed according to Credere SOP CA-10. There were no observations of non-aqueous phase liquids (NAPL). A summary of measured groundwater elevations derived from a synoptic gauging round on April 26, 2022, is provided in **Table 2**. Groundwater elevations were calculated by subtracting the groundwater level (considered a high tide reading) from the PVC well riser elevation.

Wells were then sampled according to Credere SOP CA-12 with a peristaltic pump (OBMWs or BRMWs) based on the well head. Pump types are shown on the Field Logs in **Appendix D**. Low-flow sampling procedures or no-purge methodologies where appropriate were used for purging and sampling. Wells were purged at a stable flow rate at 100 mL per minute to avoid drawdown of the water level, which were measured at approximate five-minute intervals. The saturated overburden thickness (i.e., observed water column at the time of sampling) within screened intervals ranged from 2.76 to 3.84 feet in 12OBMW-1 and 12OBMW-2 at the Maintenance Building and from 6.39 to 5.22 feet in the new wells 11OBMW-1 and 11OBMW-2. Purging could not be sustained with a stable water level or minimum drawdown or without creating the potential for wells to go dry in any of the five wells. Therefore, the no-purge sampling method was implemented. The pump was placed at the desired pump intake, one tubing volume was purged, and samples were collected. The wells were not permitted to be pumped dry.

Particular attention was paid to BRMW-4 pH during purging. This well had basic pH of 12-13 in 2018 and this high pH was confirmed in November 2020. The lab was notified of this high pH to allow for correction upon lab login if needed. During this sampling event, although 20.08 feet of water column in well screen was present, low well recharge prevented a stable drawdown condition at the lowest pumping rate and this well was also sampled by the no-purge method. The well pH was 12.19 at the time of sampling.

Samples were pumped directly into the appropriate bottleware in order of decreasing volatility. Samples were placed on ice and submitted under chain of custody to ARA for analysis in accordance with **Table 1**.

Well sampling purge water was discharged to a vegetated surface near the respective well.

Deviations from QAPP

No deviations from the QAPP occurred during the groundwater sampling.

3. DATA MANAGEMENT

3.1 FIELD QUALITY CONTROL

Throughout field activities, a designated field lead, field quality control manager (QCM), and field health and safety officer was onsite to coordinate field tasks; to provide quality assurance (QA) oversight to ensure field procedures were consistent with the QAPP and Credere SOPs; and to ensure activities were in compliance with the project's Accident Prevention Plan (APP; Credere, 2022d). Due to the short length of the program, no field audits were performed.

Field Documentation

Credere followed field documentation procedures in accordance with Credere SOP CA-1. During most weeks, several different field activities were performed concurrently, which were all recorded in a master field logbook by the field lead/QCM. The master field book also recorded significant daily events (e.g., personnel onsite, arrival times, barge trips, daily field activities), all samples collected, and all deviations from the QAPP. It was the field QCM's daily responsibility to review all logs for accuracy and consistency, match all samples collected to sample chains of custody (COCs), and document field deviations. These events/records were summarized each day in a Daily Quality Control Report (DQCR) prepared by the Field QCM and reviewed by the Credere Project Manager for review and transmittal to CENAE. The field book and field logs were scanned for the electronic project file and submitted to the Technical Lead as a final quality control (QC) check.

Copies of the DQCRs summarizing the daily activities are included in **Appendix E**.

Chain of Custodies

Credere followed procedures outlined in Credere SOP CA-16 for sample COCs to ensure each sample was accounted for at all times. The objectives of the sample custody identification and control system were to ensure the following:

- Samples scheduled for collection are uniquely identified
- The correct samples are analyzed and are traceable to their records
- Samples are protected from loss, damage, or tampering
- Alteration of samples (e.g., filtration, preservation) is documented
- A forensic record of sample integrity is established

The COC form included the following:

- Sample number and sample bottle identification number, where applicable
- Names of the sampler(s) and the person shipping the samples
- Purchase order number and/or project number

- Name, telephone number, and fax number or email address of the contact person from Credere
- Project name (including specific portion of the Site if a large project)
- Signature of the sampler
- Date and time that the samples were collected
- Names of those responsible for receiving the samples and the date and time received at the laboratory
- Matrix of the sample
- The number of containers for a particular sample
- Analysis, container type, and preservative information

The Technical Lead reviewed the COCs prior to sample submission to the laboratory for analysis.

3.2 PROJECT DATABASE

All field logs and sample documentation were uploaded to the project's *Formerly Used Defense Site Online Chemical Database* – FUDSChem (CENAE, 2016). The electronic QAPP (eQAPP), location IDs, and event planning was continually updated as new locations or sample changes were made based on field constraints or newly identified AOCs.

Generally, the following FUDSChem steps were implemented:

1. Preparation, laboratory review, and screening check review of eQAPP. Subsequent approval and certification of the eQAPP by Credere and the USACE Chemist.
2. Event planning for planned samples prior to field mobilization.
3. Input of Chemfields within 3 days of submittal to the laboratory.
4. Preparation and input of the above field data after demobilization.

Field data was also required to be reported electronically to FUDSChem. The following was reported in FUDSChem:

- Location definition information (LDI) prior to sampling
- LDIUpdate after sampling to adjust locations after sampling (pending further update after complete survey)
- Site location cross references (SLX) once the LDI was complete
- Lithologic descriptions (LTD) for new soil borings
- Well completion information (WCI) for new monitoring wells
- Well construction intervals (WINT) for new monitoring wells

- Environmental measurements (EMI) for groundwater field parameter results
- Groundwater level elevations (GWD) for groundwater levels in monitoring wells
- Shape file updates related to new locations that are part of this sampling effort

As of May 6, 2022, field data from the Spring 2022 field event as summarized herein was submitted to FUDSChem for review and was approved by the USACE Technical Lead the week of June 20, 2022.

4. SUMMARY

During the field portion of the RI, Credere completed the following tasks between March 30 and April 26, 2022:

- Executed Site clearing to facilitate RI activities.
- Advanced 28 soil borings. Collected a total of 37 soil samples from soil borings. Soil borings and associated soil samples met the field objective for those specific locations. Data will be reviewed to determine if it meets the analytical objectives as part of subsequent data gap evaluations.
- Completed ISM sampling at six DUs for a total of 20 samples. ISM sampling is considered to have met the field objective for the particular locations. Data will be reviewed to determine if it meets the analytical objectives as part of subsequent data gap evaluations.
- Collected three planned surface soil samples that are considered to have met the field objective for the specific locations. Data will be reviewed to determine if it meets the analytical objectives as part of subsequent data gap evaluations.
- Collected seven outfall surface soil/sediment samples. Locations with outfalls within the intertidal zone may include soil and sediment or when submerged below mean low water (subtidal) represent sediment.
- Installed two new monitoring wells at NED 11. Collected groundwater samples from the five planned monitoring wells.
- The field record was documented in FUDSChem through upload of EMI, GWD, WINT, WCI, and LTD files. Location data was updated after the field event with an LDI Update.
- Analytical data will be reported under separate cover as part of a RI Data Report and Data Gap Assessment once final approved laboratory data is obtained.

5. REFERENCES

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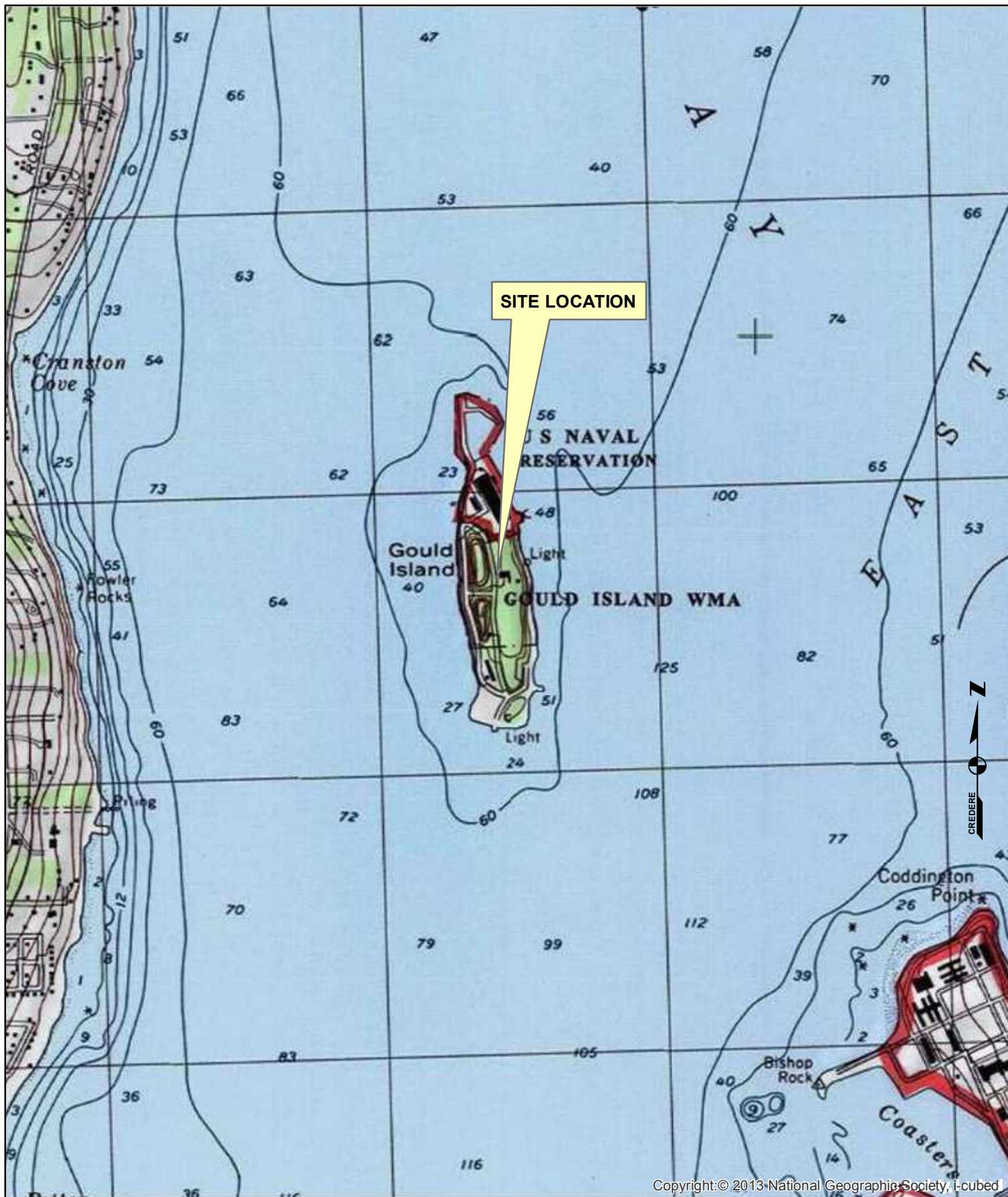
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FIGURES



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DRAWN BY: MAK/MTG	DATE: 7/15/2019
CHECKED BY: SWM	PROJECT: 16001327

FIGURE 1 SITE LOCATION PLAN

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

1,000 0 2,000
Feet
1 INCH = 2,000 FEET



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NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME
1	COAL STORAGE	14	FORMER MARINE BARRACKS	30	FORMER PYROTECHNIC STORAGE	43	FORMER PAINT SHED
2	MARINE BARRACKS (FOUNDATION REMAINING)	15	FORMER RECREATION BUILDING	31	GAS PIT	44	EMPTY DRUMS
3	FORMER CARPENTERS SHOP	16	FORMER BARRACKS	32	FORMER DRUM STORAGE AREA	45	FORMER FIRE APPARATUS HOUSES (2)
4	PUMP HOUSE	17	FORMER TRANSFORMER VAULT	33	FORMER PAINT AND OIL STORAGE	46	FORMER AA GUN EMPLACEMENTS (4)
5	FORMER UNKNOWN BUILDING #2	18	WATER TREATMENT PLANT	34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)	47	UNDERGROUND WATER TANK
6	UNKNOWN BUILDING #3	19	TORCH POT STORAGE	-	-	48	DEBRIS STOCKPILE
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)	20	FORMER CABLE TERMINAL BUILDING	35	BOILER HOUSE	49	WATER TOWER PUMP HOUSE
8	INCINERATOR	21	BUNKER #11	36	DEGAUSSING BUILDING	50	SWITCH HOUSE
9	MAGAZINE IGNITOR STORAGE	22	BUNKER #12	37	MISCELLANEOUS STORAGE	N/A	FORMER BACKGROUND SAMPLE #1 LOCATION (BG-48SS-001)
10	DISPOSAL AREA #14	23	COAL STORAGE	38	STORAGE	-	FORMER BACKGROUND SAMPLE #2 LOCATION (BG-48SS-002)
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS	24	CABLE TERMINAL BUILDING	39	WELLHOUSE #81		
12	MAINTENANCE SHOPS/GARAGE/FIRE STATION	25	UNDERGROUND STORAGE TANKS	40	WELLHOUSE #78		
13	ELECTRIC SUBSTATION TRANSFORMER	26	GAS PUMP HOUSE/GAS TANKS (REMOVED)	41	AA GUNS ELECTRICAL SUPPLY (UTILITY POLE REMAINING)		
		27	TWO GAS PITS	42	5,000 GALLON AVGS TANK		
		28	FORMER ORDNANCE TEST FACILITY	43	FORMER PAINT SHED		
		29	FORMER UNKNOWN BUILDING #1				

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FIGURE 2

DETAILED SITE PLAN

GOULD ISLAND

NARRAGANSETT BAY

JAMESTOWN, RHODE ISLAND

CONSTRUCTED ROADWAY

HISTORICAL EDGE OF ROADWAY

HISTORICAL RAIL LINE

HISTORICAL UNPAVED ROAD

5 FOOT CONTOUR LINE

APPROXIMATE PARCEL BOUNDARY

NED SITE NUMBER

SITE BOUNDARY

US NAVY OR COAST GUARD EASEMENTS / NON-FUDS ELIGIBLE

DISPOSAL AREAS

UST

HISTORICAL STRUCTURES

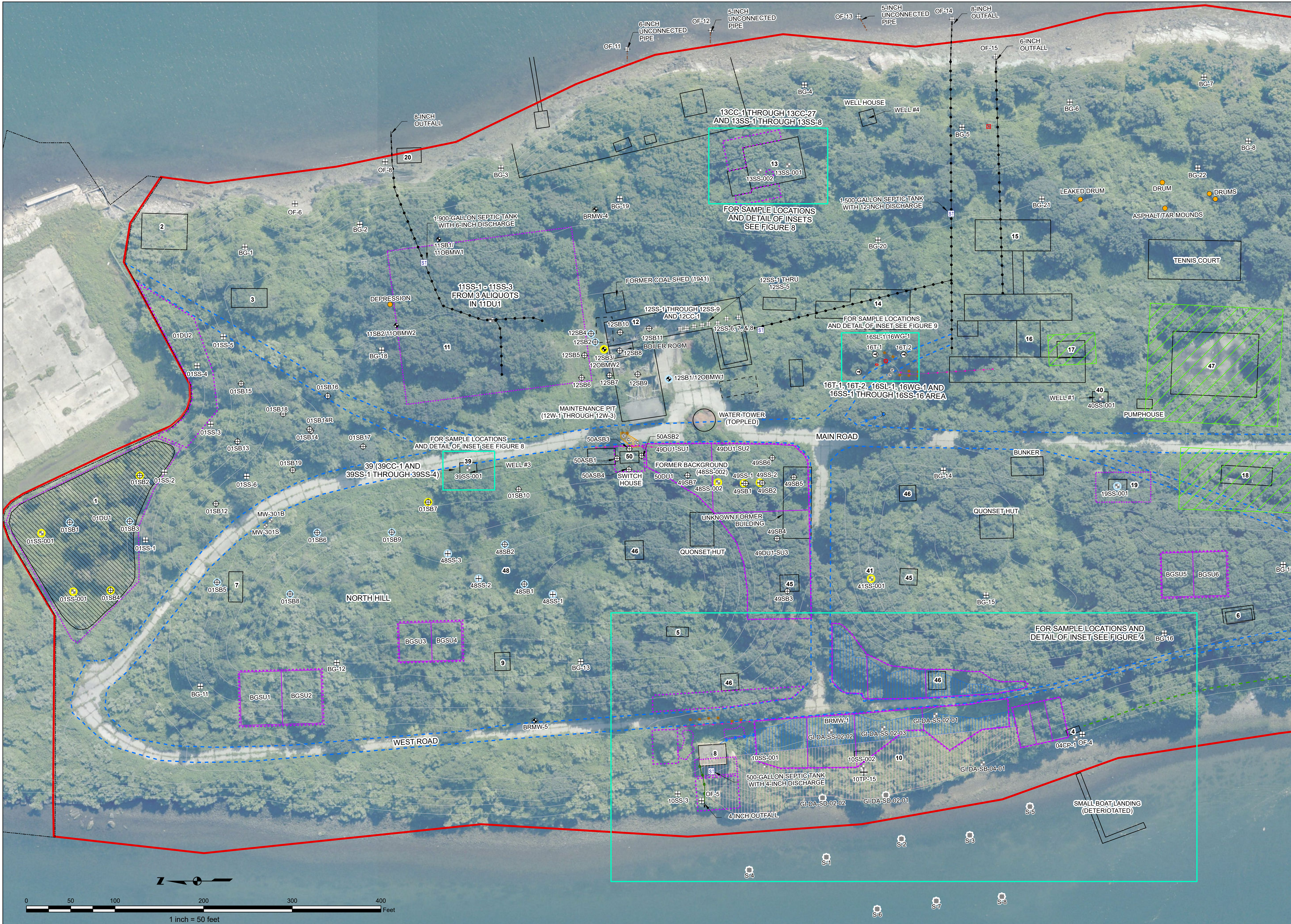
2019 DEMO/WORK AREA

2021 DEMOLITION AREAS

NOTES:
EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2014 USDA NAIP DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY, US COAST GUARD, ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES, AND FIELD WORK PERFORMED FROM FEBRUARY 7, 2019 TO JANUARY 2022.

ORTHO IMAGE: RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEMS

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NED SITE NUMBER	NED SITE NAME
1	COAL STORAGE
2	MARINE BARRACKS (FOUNDATION REMAINING)
3	FORMER CARPENTERS SHOP
4	PUMP HOUSE
5	FORMER UNKNOWN BUILDING #2
6	FORMER UNKNOWN BUILDING #3
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)
8	INCINERATOR
9	MAGAZINE IGNITOR STORAGE
10	DISPOSAL AREA #14
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS
12	MAINTENANCE SHOPS/GARAGE/FIRESTATION
13	ELECTRIC SUBSTATION TRANSFORMER PEN
14	FORMER MARINE BARRACKS
15	FORMER RECREATION BUILDING
16	FORMER BARRACKS
17	FORMER TRANSFORMER VAULT
18	WATER TREATMENT PLANT
19	TORCH POT STORAGE
20	FORMER CABLE TERMINAL BUILDING
21	BUNKER #11
22	BUNKER #12
23	COAL STORAGE
24	CABLE TERMINAL BUILDING
25	UNDERGROUND STORAGE TANKS
26	GAS PUMP HOUSE/GAS TANKS (REMOVED)
27	TWO GAS PITS
28	FORMER ORDNANCE TEST FACILITY HANGAR
29	FORMER UNKNOWN BUILDING #1 (HANGAR 5496-61)
30	FORMER PYROTECHNIC STORAGE
31	GAS PIT
32	FORMER DRUM STORAGE AREA
33	FORMER PAINT AND OIL STORAGE
34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)
35	BOILER HOUSE
36	DEGAUSSING BUILDING
37	MISCELLANEOUS STORAGE
38	STORAGE
39	WELLHOUSE #81
40	WELLHOUSE #78
41	AA GUNS ELECTRICAL SUPPLY (UTILITY POLE REMAINING)
42	5,000 GALLON AV/GAS TANK
43	FORMER PAINT SHED
44	EMPTY DRUMS
45	FORMER FIRE APPARATUS HOUSES (2)
46	FORMER AA GUN EMPLACEMENTS (4)
47	UNDERGROUND WATER TANK
48	DEBRIS STOCKPILE
49	WATER TOWER PUMP HOUSE
50	SWITCH HOUSE

+

SURFACE SOIL SAMPLE LOCATION

+

SOIL BORING/OVERBURDEN MONITORING WELL LOCATION

+

BEDROCK MONITORING WELL LOCATION

+

SOIL BORING SAMPLE LOCATION

+

SURFACE SOIL SAMPLE LOCATION

+

EXISTING MONITORING WELL (US NAVY)

+

PREVIOUS SOIL SAMPLE LOCATION (STONE AND WEBSTER, 1997)

+

SOIL CONCENTRATION AT/BELOW SCREENING LEVEL

+

SOIL CONCENTRATION EXCEEDS SCREENING LEVEL

+

FORMER UST

+

TRANSFORMERS

+

PREVIOUS SEDIMENT SAMPLE LOCATION (STONE AND WEBSTER, 1997)

+

DECISION UNIT BOUNDARY

+

SAMPLING UNIT BOUNDARY

+

APPROXIMATE SITE BOUNDARY

+

APPROXIMATE PARCEL BOUNDARY

+

US NAVY EASEMENTS / NON-FUDS ELIGIBLE

+

RAMP

+

HISTORICAL EDGE OF ROADWAY

+

HISTORICAL RAIL LINE

+

HISTORICAL UNPAVED ROAD

+

VISUAL DELINEATION OF DISPOSAL AREA 14

+

GEOGRAPHICAL DELINEATION OF DISPOSAL AREA 14

+

REMOVED UST

+

AREAS OF CONCERN

+

HISTORICAL STRUCTURES

+

APPROXIMATE LOCATION OF 2 X 3 HATCH

+

HYDRANT

+

MANHOLE

+

VERTICAL DRAIN

+

VERTICAL PIPE

+

POSSIBLE UTILITY (MARKED IN FIELD)

+

POSSIBLE UTILITY (UNMARKED IN FIELD)

+

WATER LINE

+

IN-PLACE OUTFALL PIPE

+

UNCONNECTED PIPE

+

HISTORICAL PLANS WASTE PIPES

+

ELECTRIC LINE

+

DRAIN LINE

+

ANOMALY - AREA OF POSSIBLE BURIED METAL

+

POSSIBLE VAULT

+

48 NED SITE NUMBER

FIGURE 3
SAMPLE LOCATIONS
NORTHERN AREAS OF CONCERN

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2019 STATE OF RHODE ISLAND ORTHOPHOTOGRAHY, US COAST GUARD, AND ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES.
2. OF-5 WAS PLACED USING FIELD COLLECTED COORDINATES. OF-6 AND OF-8 SAMPLE LOCATIONS ARE APPROXIMATE AND BASED ON FIELD OBSERVATIONS AND GEOPHYSICS FROM HAGER RICHTER GEOSCIENCE, INC.

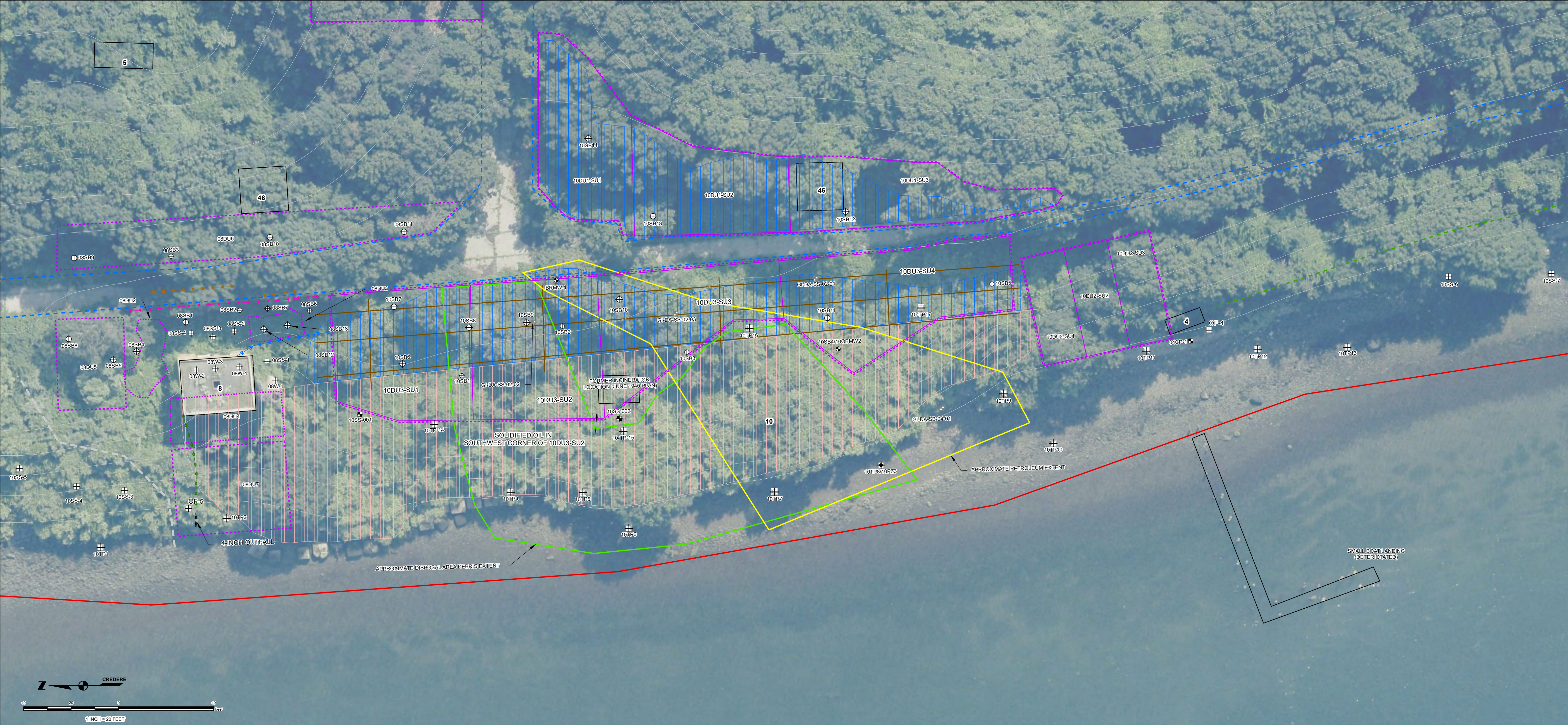
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ORTHO IMAGE: RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEMS

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NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME						
1	COAL STORAGE	26	GAS PUMP HOUSE/GAS TANKS (REMOVED)	⊕	SURFACE SOIL SAMPLE LOCATION	▭	APPROXIMATE SITE BOUNDARY	—	5 FOOT CONTOUR LINE
2	MARINE BARRACKS (FOUNDATION REMAINING)	27	TWO GAS PITS	⊕	TEST PIT/PEIZOMETER LOCATION	▭	APPROXIMATE PARCEL BOUNDARY	—	RAMP
3	FORMER CARPENTERS SHOP	28	FORMER ORDNANCE TEST FACILITY HANGAR	⊕	TEST PIT LOCATION	▭	US NAVY EASEMENTS / NON-FUDS ELIGIBLE	---	HISTORICAL EDGE OF ROADWAY
4	PUMP HOUSE	29	FORMER UNKNOWN BUILDING #1 (HANGAR 5496-81)	⊕		▭	DECISION UNIT BOUNDARY	---	HISTORICAL RAIL LINE
5	FORMER UNKNOWN BUILDING #2	30	FORMER PYROTECHNIC STORAGE	⊕		▭	SAMPLING UNIT BOUNDARY	---	SEISMIC LINES
6	UNKNOWN BUILDING #3	31	GAS PIT	⊕		▭	GEOPHYSICAL DELINEATION OF DISPOSAL AREA 14	---	HISTORICAL UNPAVED ROAD
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)	32	FORMER DRUM STORAGE AREA	⊕		▭	VISUAL DELINEATION OF DISPOSAL AREA 14	---	POSSIBLE UTILITY (UNMARKED IN FIELD)
8	INCINERATOR	33	FORMER PAINT AND OIL STORAGE	⊕		▭	APPROXIMATE PARCEL BOUNDARY	---	DRAIN LINE
9	MAGAZINE IGNITOR STORAGE	34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)	⊕		▭	HISTORICAL STRUCTURES	---	POSSIBLE UTILITY (MARKED IN FIELD)
10	DISPOSAL AREA #14	35	BOILER HOUSE	⊕		▭	APPROXIMATE DISPOSAL AREA DEBRIS EXTENT	---	WATER LINE
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS	36	DEGAUSSING BUILDING	⊕		▭		---	IN-PLACE OUTFALL PIPE
12	MAINTENANCE SHOPS/GARAGE/FIRE STATION	37	MISCELLANEOUS STORAGE	⊕		▭		---	APPARENT INCINERATOR EXTENT TO THE NORTH
13	ELECTRIC SUBSTATION TRANSFORMER	38	STORAGE	⊕		▭			
14	PEN	39	WELLHOUSE #81	⊕		▭			
15	FORMER MARINE BARRACKS	40	WELLHOUSE #78	⊕		▭			
16	FORMER RECREATION BUILDING	41	AA GUNS ELECTRICAL SUPPLY (UTILITY POLE REMAINING)	⊕		▭			
17	FORMER BARRACKS	42	5,000 GALLON AV GAS TANK	⊕		▭			
18	FORMER TRANSFORMER VAULT	43	FORMER PAINT SHED	⊕		▭			
19	WATER TREATMENT PLANT	44	EMPTY DRUMS	⊕		▭			
20	TORCH POT STORAGE	45	FORMER FIRE APPARATUS HOUSES (2)	⊕		▭			
21	FORMER CABLE TERMINAL BUILDING	46	FORMER AA GUN EMPLACEMENTS (4)	⊕		▭			
22	BUNKER #11	47	UNDERGROUND WATER TANK	⊕		▭			
23	BUNKER #12	48	DEBRIS STOCKPILE	⊕		▭			
24	COAL STORAGE	49	WATER TOWER PUMP HOUSE	⊕		▭			
25	CABLE TERMINAL BUILDING	50	SWITCH HOUSE	⊕		▭			
	UNDERGROUND STORAGE TANKS			⊕		▭			

⊕ SURFACE SOIL SAMPLE LOCATION

⊕ TEST PIT/PEIZOMETER LOCATION

⊕ TEST PIT LOCATION

⊕ SOIL BORING SAMPLE LOCATION

⊕ SOIL BORING/OVERBURDEN MONITORING WELL LOCATION

⊕ BEDROCK MONITORING WELL LOCATION

⊕ SOIL BORING/OVERBURDEN MONITORING WELL LOCATION

⊕ PREVIOUS SOIL SAMPLE LOCATION (STONE AND WEBSTER, 1997)

▭ APPROXIMATE SITE BOUNDARY

▭ APPROXIMATE PARCEL BOUNDARY

▭ US NAVY EASEMENTS / NON-FUDS ELIGIBLE

▭ DECISION UNIT BOUNDARY

▭ SAMPLING UNIT BOUNDARY

▭ GEOPHYSICAL DELINEATION OF DISPOSAL AREA 14

▭ VISUAL DELINEATION OF DISPOSAL AREA 14

▭ APPROXIMATE PARCEL BOUNDARY

▭ HISTORICAL STRUCTURES

▭ APPROXIMATE DISPOSAL AREA DEBRIS EXTENT

▭ APPROXIMATE PETROLEUM EXTENT

— 5 FOOT CONTOUR LINE

— RAMP

--- HISTORICAL EDGE OF ROADWAY

--- HISTORICAL RAIL LINE

--- SEISMIC LINES

--- HISTORICAL UNPAVED ROAD

--- POSSIBLE UTILITY (UNMARKED IN FIELD)

--- DRAIN LINE

--- POSSIBLE UTILITY (MARKED IN FIELD)

--- WATER LINE

--- IN-PLACE OUTFALL PIPE

--- APPARENT INCINERATOR EXTENT TO THE NORTH

NOTES:

1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2020 STATE OF RHODE ISLAND ORTHOPHOTOGRAPHY, US COAST GUARD, AND ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES.

2. SEE FIGURE 2 FOR FULL VIEW OF THE SITE.

3. PREVIOUS SEDIMENT SAMPLE LOCATIONS FROM THE 1984 AND 1985 INVESTIGATIONS BY LOUREIRO ENGINEERING ASSOCIATES ARE NOT SHOWN ON THIS FIGURE. SEE FIGURE 11 FOR THE APPROXIMATE LOCATION OF THESE SAMPLES.

4. OF-5 WAS PLACED USING FIELD COLLECTED COORDINATES. OTHER OUTFALL SAMPLE LOCATIONS ARE APPROXIMATE AND BASED ON FIELD OBSERVATIONS AND GEOPHYSICS FROM HAGER RICHTER GEOSCIENCE, INC.

FIGURE 4

SAMPLE LOCATIONS

INCINERATOR (NED 8) AND

DISPOSAL AREA 14 (NED 10)

GOULD ISLAND

NARRAGANSETT BAY

JAMESTOWN, RHODE ISLAND

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CHECKED BY: ASD

DATE: 05/05/2022

PROJECT: 16001327

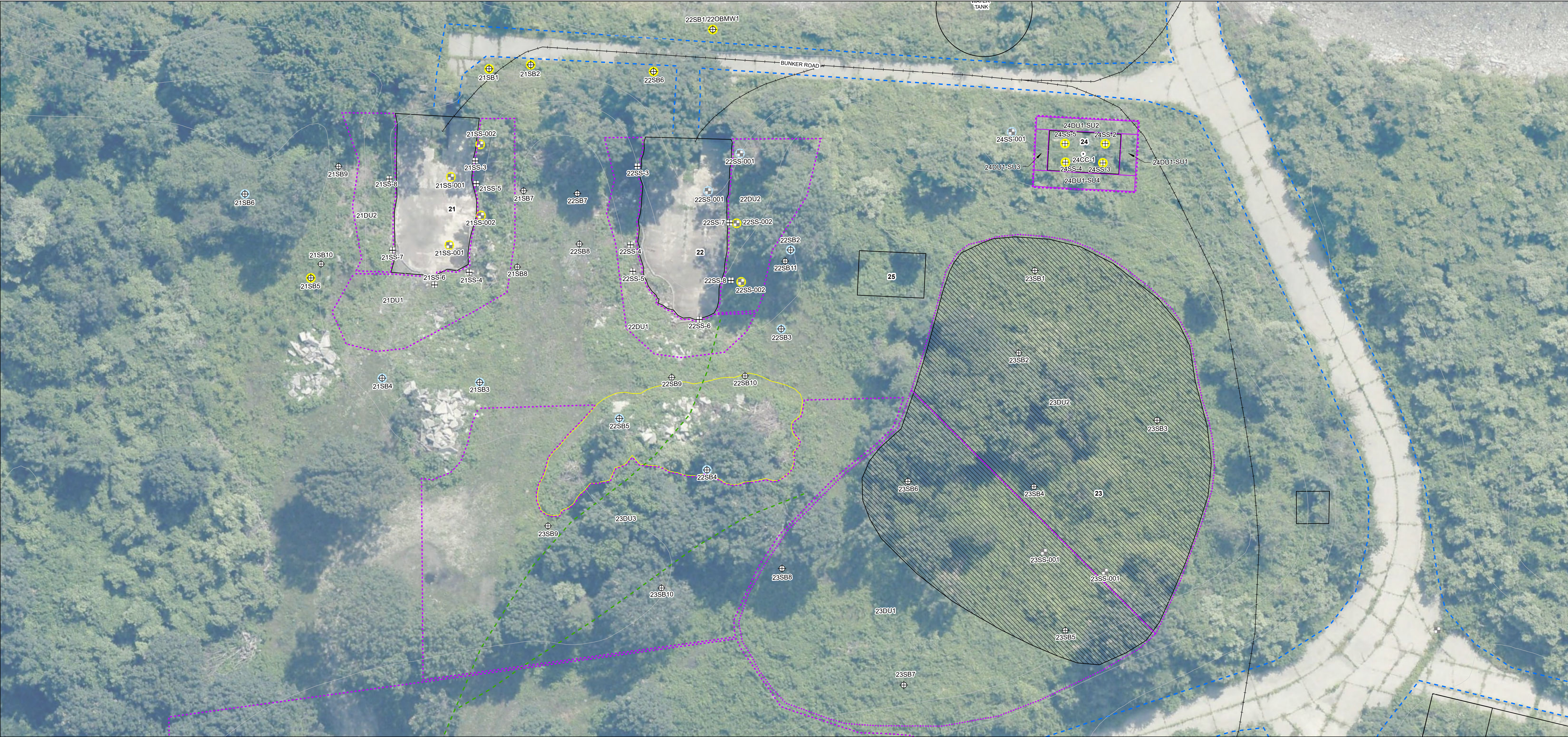
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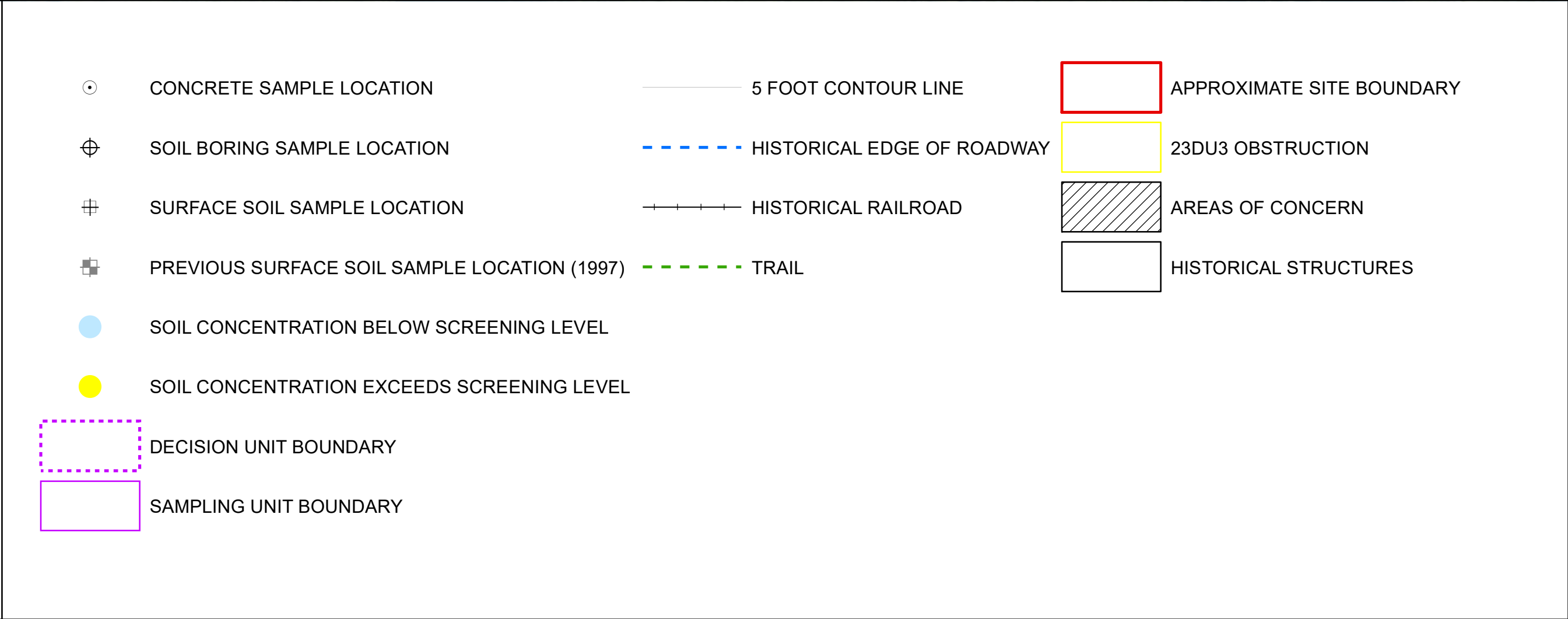
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NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME
1	COAL STORAGE	26	GAS PUMP HOUSE/GAS TANKS (REMOVED)
2	MARINE BARRACKS (FOUNDATION REMAINING)	27	TWO GAS PITS
3	FORMER CARPENTERS SHOP	28	FORMER ORDNANCE TEST FACILITY HANGAR
4	PUMP HOUSE	29	FORMER UNKNOWN BUILDING #1 (HANGAR 5496-61)
5	FORMER UNKNOWN BUILDING #2	30	FORMER PYROTECHNIC STORAGE
6	UNKNOWN BUILDING #3	31	GAS PIT
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)	32	FORMER DRUM STORAGE AREA
8	INCINERATOR	33	FORMER PAINT AND OIL STORAGE
9	MAGAZINE IGNITOR STORAGE	34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)
10	DISPOSAL AREA #14	-	BOILER HOUSE
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS	35	DEGAUSSING BUILDING
12	MAINTENANCE SHOPS/GARAGE/FIRE STATION	36	MISCELLANEOUS STORAGE
13	ELECTRIC SUBSTATION TRANSFORMER	37	STORAGE
14	PEN	38	WELLHOUSE #81
15	FORMER MARINE BARRACKS	39	WELLHOUSE #78
16	FORMER RECREATION BUILDING	40	AA GUNS ELECTRICAL SUPPLY (UTILITY POLE REMAINING)
17	FORMER BARRACKS	41	5,000 GALLON AVGAS TANK
18	FORMER TRANSFORMER VAULT	42	FORMER PAINT SHED
19	WATER TREATMENT PLANT	43	EMPTY DRUMS
20	TORCH POT STORAGE	44	FORMER FIRE APPARATUS HOUSES (2)
21	FORMER CABLE TERMINAL BUILDING	45	FORMER AA GUN EMPLACEMENTS (4)
22	BUNKER #11	46	UNDERGROUND WATER TANK
23	BUNKER #12	47	DEBRIS STOCKPILE
24	COAL STORAGE	48	WATER TOWER PUMP HOUSE
25	CABLE TERMINAL BUILDING	49	SWITCH HOUSE
	UNDERGROUND STORAGE TANKS	50	



NOTES:

- EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2014 USDA NAIP DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY, US COAST GUARD, AND ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES.
- SEE FIGURE 2 FOR FULL VIEW OF THE SITE.
- PREVIOUS SEDIMENT SAMPLE LOCATIONS FROM THE 1984 AND 1985 INVESTIGATIONS BY LOUREIRO ENGINEERING ASSOCIATES ARE NOT SHOWN ON THIS FIGURE. SEE FIGURE 11 FOR THE APPROXIMATE LOCATION OF THESE SAMPLES.

FIGURE 6
SAMPLE LOCATIONS
BUNKERS 11 AND 12 (NED 21 AND 22)

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

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NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME
1	COAL STORAGE	26	GAS PUMP HOUSE/GAS TANKS (REMOVED)
2	MARINE BARRACKS (FOUNDATION REMAINING)	27	TWO GAS PITS
3	FORMER CARPENTERS SHOP	28	FORMER ORDINANCE TEST FACILITY HANGAR
4	PUMP HOUSE	29	FORMER UNKNOWN BUILDING #1 (HANGAR 5496-61)
5	FORMER UNKNOWN BUILDING #2	30	FORMER PYROTECHNIC STORAGE
6	UNKNOWN BUILDING #3	31	GAS PIT
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)	32	FORMER DRUM STORAGE AREA
8	INCINERATOR	33	FORMER PAINT AND OIL STORAGE
9	MAGAZINE IGNITOR STORAGE	34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)
10	DISPOSAL AREA #14	-	BOILER HOUSE
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS	35	DEGAUSSING BUILDING
12	MAINTENANCE SHOPS/GARAGE/FIRE STATION	36	MISCELLANEOUS STORAGE
13	ELECTRIC SUBSTATION TRANSFORMER	37	STORAGE
-	PEN	38	WELLHOUSE #81
14	FORMER MARINE BARRACKS	40	WELLHOUSE #78
15	FORMER RECREATION BUILDING	41	AA GUNS ELECTRICAL SUPPLY (UTILITY POLE REMAINING)
16	FORMER BARRACKS	42	5,000 GALLON AV/GAS TANK
17	FORMER TRANSFORMER VAULT	43	FORMER PAINT SHED
18	WATER TREATMENT PLANT	44	EMPTY DRUMS
19	TORCH POT STORAGE	45	FORMER FIRE APPARATUS HOUSES (2)
20	FORMER CABLE TERMINAL BUILDING	46	FORMER AA GUN EMPLACEMENTS (4)
21	BUNKER #11	47	UNDERGROUND WATER TANK
22	BUNKER #12	48	DEBRIS STOCKPILE
23	COAL STORAGE	49	WATER TOWER PUMP HOUSE
24	CABLE TERMINAL BUILDING	50	SWITCH HOUSE
25	UNDERGROUND STORAGE TANKS		

APPROXIMATE SITE BOUNDARY

⊕

SOIL BORING SAMPLE LOCATION

⊕

SURFACE SOIL SAMPLE LOCATION

⊕

BEDROCK MONITORING WELL LOCATION

●

SOIL CONCENTRATION BELOW SCREENING LEVEL

●

SOIL CONCENTRATION EXCEEDS SCREENING LEVEL

⊕

VERTICAL DRAIN

⊕

VERTICAL PIPE

—

5 FOOT CONTOUR LINE

ROADWAY

—●—●—●—●—

DRAIN LINE

UNCONNECTED PIPE

HISTORICAL STRUCTURE

DECISION UNIT BOUNDARY

DECISION UNIT BOUNDARY

NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2014 USDA NAIP DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY, US COAST GUARD, AND ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES.
2. SEE FIGURE 2 FOR FULL VIEW OF THE SITE.
3. PREVIOUS SEDIMENT SAMPLE LOCATIONS FROM THE 1984 AND 1985 INVESTIGATIONS BY LOUREIRO ENGINEERING ASSOCIATES ARE NOT SHOWN ON THIS FIGURE. SEE FIGURE 11 FOR THE APPROXIMATE LOCATION OF THESE SAMPLES.

FIGURE 7

SAMPLE LOCATIONS

BOILER HOUSE (NED 35)

GOULD ISLAND

NARRAGANSETT BAY

JAMESTOWN, RHODE ISLAND

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Community

Economy

Environment

Credere Associates, LLC

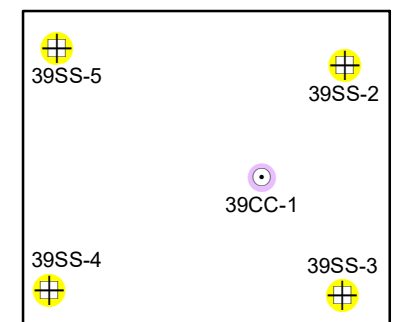
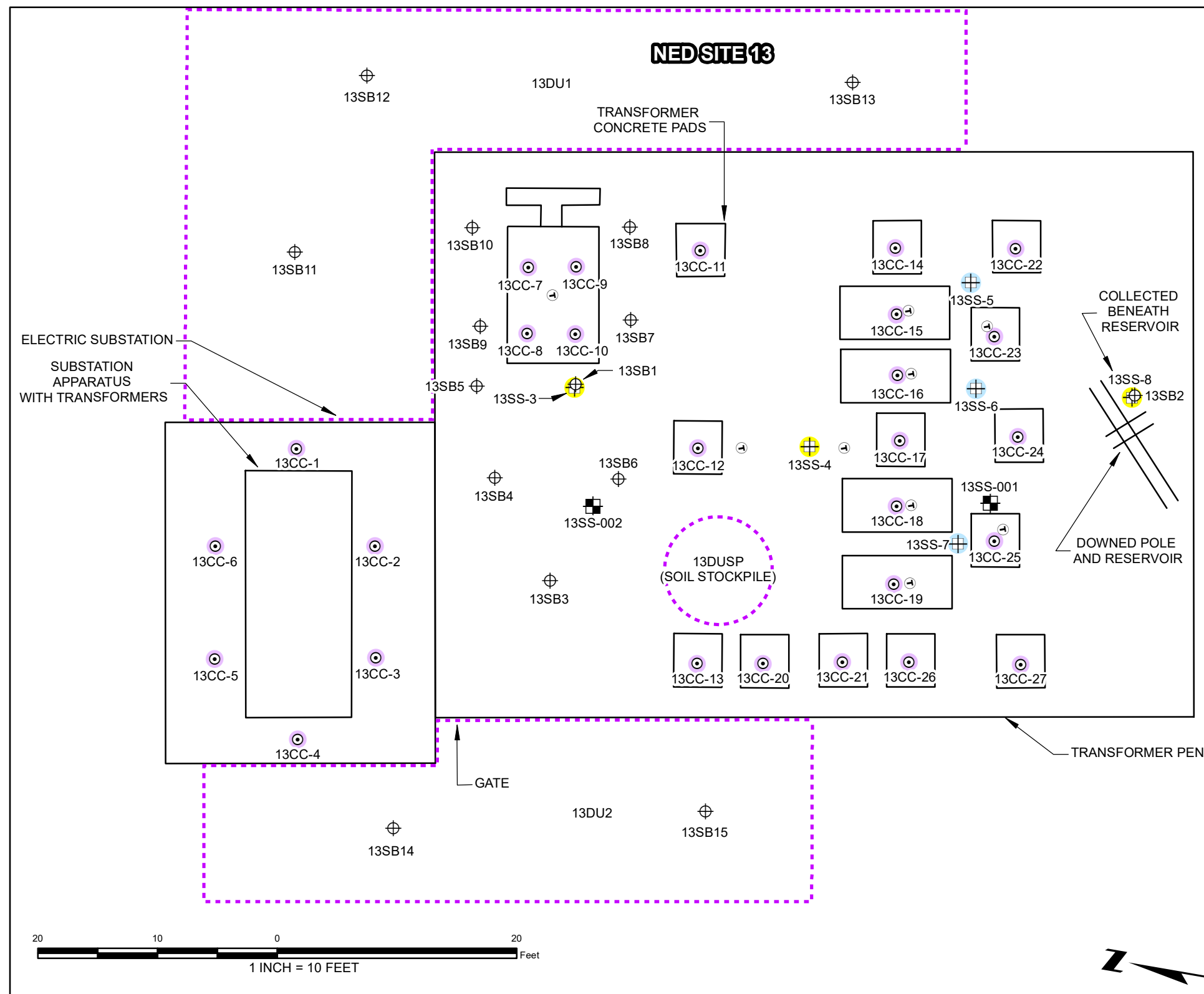
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FIGURE 8
SAMPLE LOCATIONS
NED SITES 13 AND 39

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

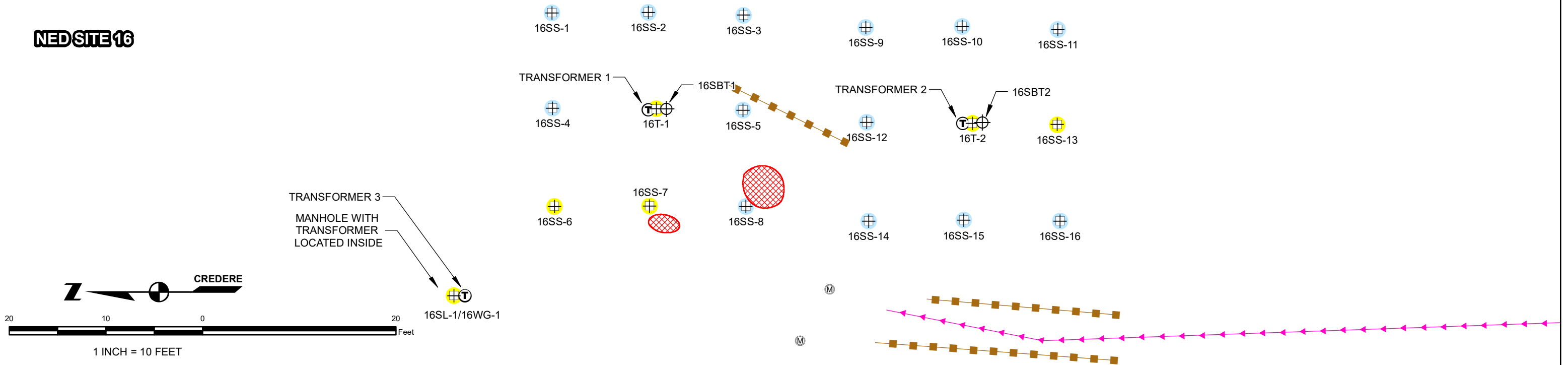
- | | | | |
|---|---|---|--|
|  | SOIL BORING SAMPLE LOCATION |  | SOIL CONCENTRATION ABOVE SCREENING LEVEL |
|  | SURFACE SOIL SAMPLE LOCATION |  | SOIL CONCENTRATION BELOW SCREENING LEVEL |
|  | TRANSFORMER |  | CONCRETE CONCENTRATION BELOW SCREENING/CLEANUP LEVEL |
|  | SURFACE SOIL/WATER GRAB SAMPLE LOCATION |  | BUILDING FEATURE |
|  | CONCRETE SAMPLE LOCATION |  | DECISION UNIT BOUNDARY |
|  | PREVIOUS SURFACE SOIL |  | HISTORICAL STRUCTURE |

NOTES:

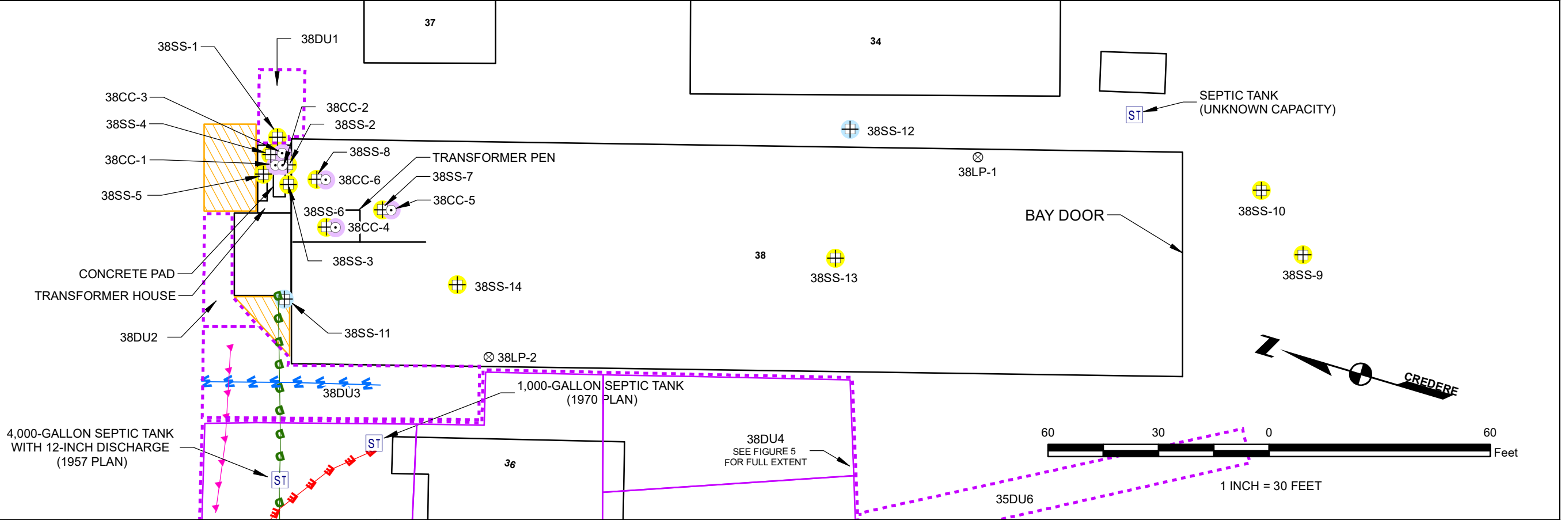
NOTES:

1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2014 USDA NAIP DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY, US COAST GUARD, AND ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES.
2. SEE FIGURE 2 FOR FULL VIEW OF THE SITE.
3. HISTORICAL SURFACE SOIL SAMPLES 13SS-001 AND 13SS-002 WERE NOT DISPLAYED BECAUSE OF THE LACK OF A TRUE LOCATION DUE TO THE SCALE OF THE ORIGINAL FIGURE.

NED SITE 16



NED SITE 38



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FIGURE 9
SAMPLE LOCATIONS
NED SITES 16 AND 38

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

- ⊗ LEAD PAINT SAMPLE
 - ⊙ CONCRETE SAMPLE
 - ⊕ SURFACE SOIL/WATER GRAB SAMPLE
 - Ⓣ TRANSFORMER
 - ⊕ SOIL BORING LOCATION
 - DECISION UNIT BOUNDARY
 - SAMPLING UNIT BOUNDARY
- SOIL CONCENTRATION EXCEEDS SCREENING LEVEL
 - SOIL CONCENTRATION BELOW SCREENING LEVEL
 - CONCRETE CONCENTRATION BELOW SCREENING/CLEANUP LEVEL
 - ▨ CONCRETE
 - ▭ HISTORICAL STRUCTURE
 - ▨ ANOMALY - AREA OF POSSIBLE BURIED METAL
- ▲ POSSIBLE UTILITY (MARKED IN FIELD)
 - WATER LINE
 - POSSIBLE UTILITY (UNMARKED IN FIELD)
 - DRAIN LINE
 - ELECTRIC LINE
 - Ⓜ MANHOLE
 - ST SEPTIC TANK LOCATION

NOTES:
1. EXISTING CONDITIONS FEATURES SHOWN ON THIS PLAN ARE APPROXIMATE AND ARE BASED ON INFORMATION OBTAINED FROM 2014 USDA NAIP DIGITAL TRUE COLOR ORTHOPHOTOGRAPHY, US COAST GUARD, AND ENGINEERING EVALUATION OF CONTAMINATION FORMER NAVY TORPEDO TESTING FACILITY BY STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES.
2. SEE FIGURE 2 FOR FULL VIEW OF THE SITE.
3. HISTORICAL SURFACE SOIL SAMPLES 13SS-001 AND 13SS-002 WERE NOT DISPLAYED BECAUSE OF THE LACK OF A TRUE LOCATION DUE TO THE SCALE OF THE ORIGINAL FIGURE.



NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME						
1	COAL STORAGE	26	GAS PUMP HOUSE/GAS TANKS (REMOVED)	⊕	SEDIMENT SAMPLE LOCATION	●	SOIL CONCENTRATION BELOW SCREENING LEVEL	—	5 FOOT CONTOUR LINE
2	MARINE BARRACKS (FOUNDATION REMAINING)	27	TWO GAS PITS	⊕	SOIL BORING LOCATION	●	SOIL CONCENTRATION EXCEEDS SCREENING LEVEL	⋯	DU BOUNDARY
3	FORMER CARPENTERS SHOP	28	FORMER ORDNANCE TEST FACILITY HANGAR	⊕	SURFACE SOIL SAMPLE	⬜	APPROXIMATE SITE BOUNDARY	- - -	ROADWAY
4	PUMP HOUSE	29	FORMER UNKNOWN BUILDING #1 (HANGAR 5496-61)	⊕	SURFACE SOIL SAMPLE LOCATION	▨	GEOPHYSICAL DELINEATION OF DISPOSAL AREA 14	- - -	HISTORICAL UNPAVED ROAD
5	FORMER UNKNOWN BUILDING #2	30	FORMER PYROTECHNIC STORAGE	⊕	TEST PIT/PEIZOMETER LOCATION	▨	VISUAL DELINEATION OF DISPOSAL AREA 14		
6	UNKNOWN BUILDING #3	31	GAS PIT	⊕	TEST PIT LOCATION	▨	HISTORICAL STRUCTURES		
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)	32	FORMER DRUM STORAGE AREA	⊕	SOIL BORING SAMPLE LOCATION				
8	INCINERATOR	33	FORMER PAINT AND OIL STORAGE	⊕	SOIL BORING/OVERBURDEN MONITORING WELL LOCATION				
9	MAGAZINE IGNITOR STORAGE	34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)	⊕	BEDROCK MONITORING WELL LOCATION				
10	DISPOSAL AREA #14	-	BOILER HOUSE	⊕	PREVIOUS SOIL SAMPLE LOCATION (STONE AND WEBSTER, 1997)				
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS	35	DEGAUSSING BUILDING	⊕	PREVIOUS SEDIMENT SAMPLE LOCATION (STONE AND WEBSTER, 1997)				
-	MAINTENANCE SHOPS/GARAGE/FIRE STATION	36	MISCELLANEOUS STORAGE	⊕	HISTORICAL SEDIMENT SAMPLE LOCATION (LOUREIRO ENGINEERING ASSOCIATES, 1984, 1985)				
13	ELECTRIC SUBSTATION TRANSFORMER PEN	37	STORAGE	⊕	HISTORICAL SOIL SAMPLE LOCATION				
-	FORMER MARINE BARRACKS	38	WELLHOUSE #81						
15	FORMER RECREATION BUILDING	39	WELLHOUSE #78						
16	FORMER BARRACKS	40	AA GUNS ELECTRICAL SUPPLY (UTILITY POLE REMAINING)						
17	FORMER TRANSFORMER VAULT	41	5,000 GALLON AVGAS TANK						
18	WATER TREATMENT PLANT	42	FORMER PAINT SHED						
19	TORCH POT STORAGE	43	EMPTY DRUMS						
20	FORMER CABLE TERMINAL BUILDING	44	FORMER FIRE APPARATUS HOUSES (2)						
21	BUNKER #11	45	FORMER AA GUN EMPLACEMENTS (4)						
22	BUNKER #12	46	UNDERGROUND WATER TANK						
23	COAL STORAGE	47	DEBRIS STOCKPILE						
24	CABLE TERMINAL BUILDING	48	WATER TOWER PUMP HOUSE						
25	UNDERGROUND STORAGE TANKS	49	SWITCH HOUSE						
		50							

NOTES:
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2. SEE FIGURE 2 FOR FULL VIEW OF THE SITE.

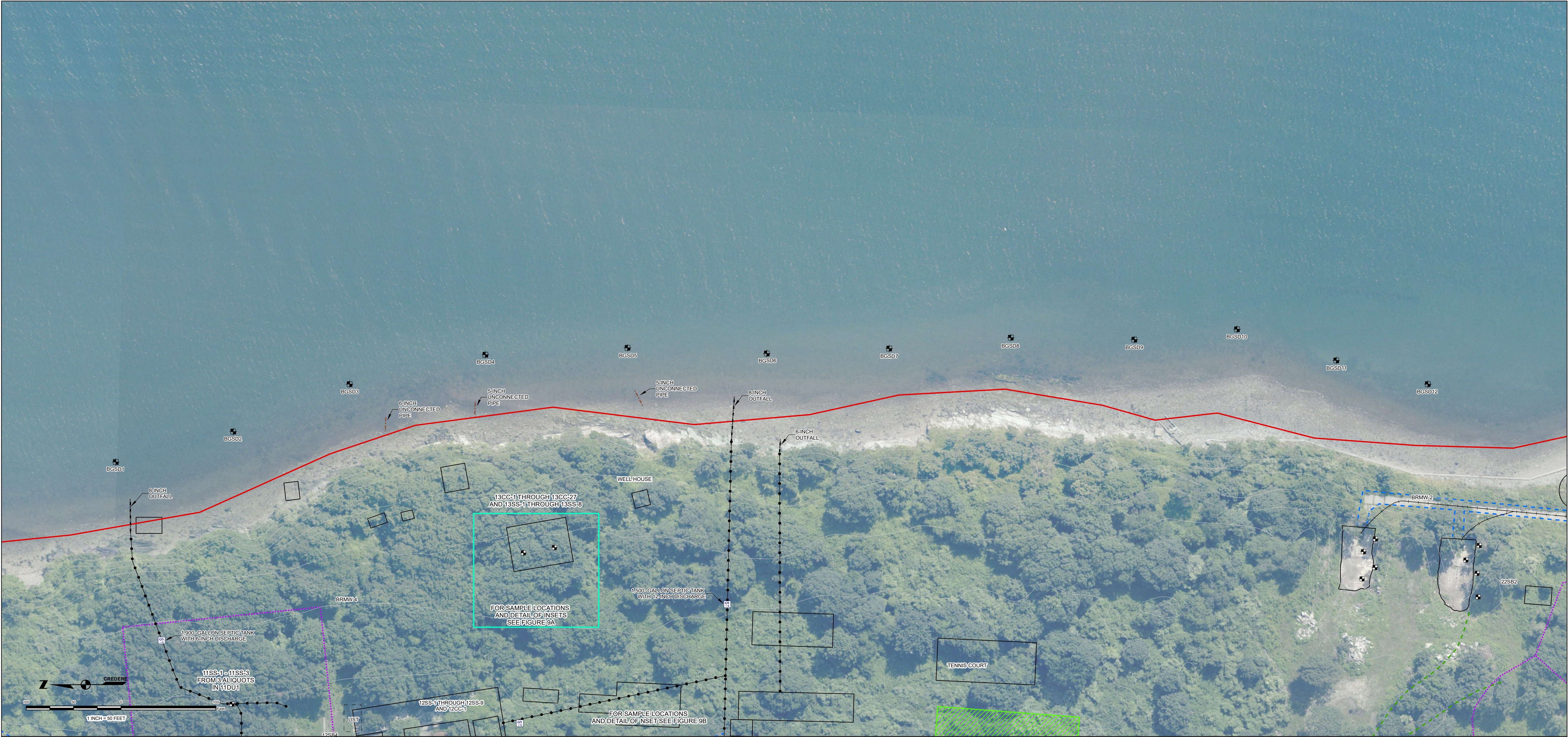
FIGURE 11
SAMPLE LOCATIONS OF SEDIMENT

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

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NED SITE NUMBER	NED SITE NAME	NED SITE NUMBER	NED SITE NAME
1	COAL STORAGE	26	GAS PUMP HOUSE/GAS TANKS (REMOVED)
2	MARINE BARRACKS (FOUNDATION REMAINING)	27	TWO GAS PITS
3	FORMER CARPENTERS SHOP	28	FORMER ORDNANCE TEST FACILITY HANGAR
4	PUMP HOUSE	29	FORMER UNKNOWN BUILDING #1 (HANGAR 5496-61)
5	FORMER UNKNOWN BUILDING #2	30	FORMER PYROTECHNIC STORAGE
6	UNKNOWN BUILDING #3	31	GAS PIT
7	FORMER UNKNOWN BUILDING #4 (FOOTINGS REMAINING)	32	FORMER DRUM STORAGE AREA
8	INCINERATOR	33	FORMER PAINT AND OIL STORAGE
9	MAGAZINE IGNITOR STORAGE	34	THEATER/RESEARCH BUILDING (FOUNDATION REMAINING, CONCRETE PLATFORM)
10	DISPOSAL AREA #14	-	BOILER HOUSE
11	FORMER QUONSET HUTS/MAINTENANCE SHOPS	35	DEGAUSSING BUILDING
-	MAINTENANCE SHOPS/GARAGE/FIRE STATION	36	MISCELLANEOUS STORAGE
12	ELECTRIC SUBSTATION TRANSFORMER	37	STORAGE
-	PEN	38	WELLHOUSE #81
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15	FORMER BARRACKS	41	5,000 GALLON AVGAS TANK
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19	FORMER CABLE TERMINAL BUILDING	45	FORMER AA GUN EMPLACEMENTS (4)
20	BUNKER #11	46	UNDERGROUND WATER TANK
21	BUNKER #12	47	DEBRIS STOCKPILE
22	COAL STORAGE	48	WATER TOWER PUMP HOUSE
23	CABLE TERMINAL BUILDING	49	SWITCH HOUSE
24	UNDERGROUND STORAGE TANKS	50	

- SURFACE SOIL SAMPLE LOCATION
- TEST PIT/PEIZOMETER LOCATION
- TEST PIT LOCATION
- SOIL BORING SAMPLE LOCATION
- SOIL BORING/OVERBURDEN MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- PREVIOUS SOIL SAMPLE LOCATION (STONE AND WEBSTER, 1997)
- PREVIOUS SEDIMENT SAMPLE LOCATION (STONE AND WEBSTER, 1997)
- SEPTIC TANK

- APPROXIMATE SITE BOUNDARY
- US NAVY EASEMENTS / NON-FUDS ELIGIBLE
- APPROXIMATE PARCEL BOUNDARY
- HISTORICAL STRUCTURES

- 5 FOOT CONTOUR LINE
- DU BOUNDARY
- RAMP
- ROADWAY
- HISTORICAL RAIL LINE
- HISTORICAL UNPAVED ROAD
- HISTORICAL PLANS WASTE PIPES
- IN-PLACE OUTFALL PIPE
- UNCONNECTED PIPE

NOTES:
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2. SEE FIGURE 2 FOR FULL VIEW OF THE SITE.
3. PREVIOUS SEDIMENT SAMPLE LOCATIONS FROM THE 1984 AND 1985 INVESTIGATIONS BY LOUREIRO ENGINEERING ASSOCIATES ARE NOT SHOWN ON THIS FIGURE. SEE FIGURE 11 FOR THE APPROXIMATE LOCATION OF THESE SAMPLES.

FIGURE 12 BACKGROUND SEDIMENT SAMPLE LOCATIONS

GOULD ISLAND
NARRAGANSETT BAY
JAMESTOWN, RHODE ISLAND

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TABLES

Table 1
Soil, Groundwater, Sediment, and Concrete Sample Summary
Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/AS310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
1 Coal Storage North	01DU1	01DU1-1	0-1	ISM	Assess the nature and extent of previously identified surface contamination			s		s	s	s											ISM 01DU1 comprised 30 aliquots per replicate
		01DU1-2	0-1	ISM				s		s	s	s											
		01DU1-3	0-1	ISM				s		s	s	s											
	01DU2 (2022)	01DU2-1	0-1	ISM	To assess the area of elevated PAHs at the base of the hill surrounding 01SS-4				s	s	s										1-gallon resealable bag		
		01DU2-2	0-1	ISM					s	s	s										1-gallon resealable bag		
		01DU2-3	0-1	ISM					s	s	s										1-gallon resealable bag		
	01DU2 (2018)	01DU2-1	Not collected	NA	Assess the nature and extent of previously identified surface contamination			s		s	s	s											ISM sampling was abandoned at 01DU2 and 01DU3 after little to no evidence of coal contamination was observed during the advancement of soil borings in the area prior to the start of ISM sampling
		01DU2-2	Not collected	NA				s		s	s	s											
		01DU2-3	Not collected	NA				s		s	s	s											
	01DU3 (2018)	01DU3-1	Not collected	NA				s		s	s	s											
		01DU3-2	Not collected	NA				s		s	s	s											
		01DU3-3	Not collected	NA				s		s	s	s											
	01DU2 (2020)	01DU2-1	Not collected	NA	Further assess horizontal nature and extent of COIs at surface				s	s	s												Decision unit eliminated from sampling program. Will be replaced with surface soil samples.
		01DU2-2	Not collected	NA					s	s	s												
		01DU2-3	Not collected	NA					s	s	s												
	01DU3 (2020)	01DU3-1	Not collected	NA					s	s	s												Decision unit eliminated from sampling program. Will be replaced with surface soil samples.
		01DU3-2	Not collected	NA					s	s	s												
		01DU3-3	Not collected	NA					s	s	s												
	01SS-1	01SS-1	0-1	SS	Further assess horizontal nature and extent of COIs at surface and replace ISM planned				s	s	s												Replaced planned ISM Coal observed from 0.5-1 foot bgs. Sample collected from 0-1 foot bgs.
	01SS-2	01SS-2	0-1	SS					s	s	s												Replaced planned ISM Sample collected from 0-1 foot bgs.
	01SS-3	01SS-3	0-1	SS					s	s	s												Replaced planned ISM Sample collected from 0-1 foot bgs.
	01SS-4	01SS-4	0-1	SS					s	s	s												Replaced planned ISM Sample collected from 0-1 foot bgs.
	01SS-5	01SS-5	0-1	SS					s	s	s												Replaced planned ISM Sample collected from 0-1 foot bgs.
	01SS-6	01SS-6	0-1	SS					s	s	s												Replaced planned ISM Sample collected from 0-1 foot bgs.
	01SB1	01SB1-1 (FD: 01SB1-10)	0.75-1.75	Discrete	Horizontal and vertical extent of coal in soil by visual examination.			s		s	s	s											Observed coal thickness corresponds to sample depth, One (1) additional confirmatory soil boring was advanced to confirm refusal depth (01SB1A)
		01SB1-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB2	01SB2-1	0-0.42	Discrete				s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB2-2 (2018)	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
		01SB2-2 (2020)	0.5-1	Discrete	Vertical extent of COIs previously identified at surface				s	s	s												Coal observed between 2-3" bgs; therefore, the sample collected between 0.5-1 foot bgs.

Red text indicates new samples collected during 2022 sampling event.

Table 1
Soil, Groundwater, Sediment, and Concrete Sample Summary
Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
1 Coal Storage North (cont.)	01SB3	01SB3-1	0.67-1.33	Discrete	Horizontal and vertical extent of coal in soil by visual examination.			s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB3-2 (2018)	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
		01SB3-2 (2020)	2-2.5	Discrete	Vertical extent of COIs previously identified at surface				s	s	s												Coal observed between 11-12" bgs; therefore, the sample was collected between 1.5-2 feet bgs in consideration of recovery (41)/penetration (60).
	01SB4	01SB4-1	0-1.2	Discrete	Horizontal and vertical extent of coal in soil by visual examination.			s		s	s	s											Observed coal thickness corresponds to sample depth, one (1) additional confirmatory soil boring was advanced to confirm refusal depth (01SB4A)
		01SB4-2 (2018)	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
		01SB4-2 (2020)	1.5-2	Discrete	Vertical extent of COIs previously identified at surface				s	s	s												Coal observed between 0-1.5 feet bgs; therefore, the sample was collected between 1.5-2 feet bgs.
		01SB4-3 (2020)	1.2-2.2	Discrete																			Sample collected from 1.2-2.2 feet bgs by hand auger.
	01SB5	01SB5-1	0-2	Discrete	Horizontal and vertical extent of coal in soil by visual examination.			s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB5-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB6	01SB6-1	0-2	Discrete				s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB6-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB7	01SB7-1	0.92-1.08	Discrete	Horizontal and vertical extent of coal in soil by visual examination.			s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB7-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB8	01SB8-1	0-2	Discrete				s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB8-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB9	01SB9-1	0-2	Discrete				s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB9-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB10	01SB10-1	0-2	Discrete	Delineate COIs in native soil below coal			s		s	s	s											Observed coal thickness corresponds to sample depth
		01SB10-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	01SB11 (2020)	01SB11-1	Not collected	NA						s	s	s											Not accessible
	01SB12	01SB12-1	1-3	Discrete						s	s	s											No observable black coal; therefore, the sample was collected from 1-3 feet bgs.
	01SB13	NA	Visual Only	NA																			No evidence of contamination. Refusal on bedrock at 9.5 feet bgs.
	01SB14	01SB14-1	0.5-3.5	Discrete						s	s	s											No observable black coal; therefore, the sample was collected from 0.5-3.5 feet bgs. Extended increment needed for sample volume due to rocks.
		01SB14-2	5-6/5	Discrete		s						s	s										Olfactory evidence of petroleum and PID reading of 28.83 ppm from 5-7 feet bgs; therefore, the sample was collected from 5-6/5 feet bgs.

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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
1 Coal Storage North (cont.)	01SB14R	01SB14R-1 (FD: 01SB14R-10)	5-6/5.5	Discrete	Confirm prior petroleum results				s			s	s								2 - 4 oz amber 2 - 40 mL VOA (methanol)		
		01SB14R-2	6-8/7	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
	01SB15	01SB15-1	1-3	Discrete	Delineate COIs in native soil below coal				s	s	s												No observable black coal; therefore, the sample was collected from 1-3 feet bgs.
	01SB16	01SB16-1	5-6/5.5	Discrete	Stepout assessment around 01SB14 where petroleum was previously identified				s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
		01SB16-2 (FD: 01SB16-20)	6-8/7	Discrete					s			s	s								2 - 4 oz amber 2 - 40 mL VOA (methanol)		
	01SB17	01SB17-1	5-6/5.5	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
		01SB17-2	6-8/7	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
	01SB18	01SB18-1	5-6/5.5	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
		01SB18-2	6-8/7	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
	01SB19	01SB19-1	5-6/5.5	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
		01SB19-2	6-8/7	Discrete					s			s	s								1 - 4 oz amber 1 - 40 mL VOA (methanol)		
4 Pump House	04CP-1	04CP-1	0-0.5	Discrete SS	Confirm soil concentrations in vicinity of abandoned drum(s)	s	s			s	s	s	s	s									Drums were no longer present. Therefore, the 16 aliquots were evenly spaced on a 10-foot grid.
8 Incinerator #49	Incinerator floor debris/ equipment/ stack	08W-1 (FD: 08W-10)	NA	Solid	To assess source area concentrations			s		s	s			s			s						Grab sample collected from contents of stack
		08W-2	NA	Solid				s		s	s			s			s						Grab sample collected from contents of northern fire box
		08W-3	NA	Solid				s		s	s			s			s						Collected from contents of upper southern fire box
		08W-4	NA	Solid				s		s	s			s			s						Grab sample collected from contents of lower southern fire box
		08SS-1	0-0.5/0.5	Discrete SS				s		s	s			s	s								Grab sample collected from surface soil underneath unlabeled metal containers at base of stack
	08DU1	08DU1-1	Not collected	NA	To assess perimeter soil			s		s	s			s			s						08DU1 ISM samples were not collected due to concrete slabs to the east of the incinerator building. In lieu of these surface soil samples 08SS-2, 08SS-3, and 08SS-4 were collected from between concrete slabs.
		08DU1-2	Not collected	NA				s		s	s			s			s						
		08DU1-3	Not collected	NA				s		s	s			s			s						
		08SS-2	0-0.5	Discrete SS				s		s	s			s			s						
		08SS-3	0-0.5	Discrete SS				s		s	s			s			s						
		08SS-4	0-0.5	Discrete SS				s		s	s			s			s						
	08DU2	08DU2-1	0-1	ISM	To assess perimeter soil			s		s	s			s			s						ISM 08DU2 comprised 30 aliquots per replicate
		08DU2-2	0-1	ISM				s		s	s			s			s						
		08DU2-3	0-1	ISM				s		s	s			s			s						

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8 Incinerator #49 (cont.)	08DU3	08DU3-1	0-1	ISM	To assess perimeter soil			s		s	s			s			s						ISM 08DU3 comprised 30 aliquots per replicate
		08DU3-2	0-1	ISM				s		s	s			s			s						
		08DU3-3	0-1	ISM				s		s	s			s			s						
	08DU4	08DU4-1	0-1	ISM				s		s	s			s			s						ISM 08DU4 comprised 30 aliquots per replicate
		08DU4-2	0-1	ISM				s		s	s			s			s						
		08DU4-3	0-1	ISM				s		s	s			s			s						
	08DU5	08DU5-1	0-0.66	ISM	Nature and extent of COIs at surface				s	s	s			s			s						ISM 08DU5 comprised 30 aliquots per replicate
		08DU5-2	0-0.66	ISM					s	s	s			s			s						
		08DU5-3 (MS/MSD)	0-0.66	ISM					s	s	s			s			s						
	08DU6	08DU6-1	0-1	ISM					s	s	s			s			s						ISM 08DU6 comprised 30 aliquots per replicate
		08DU6-2	0-1	ISM					s	s	s			s			s						
		08DU6-2	0-1	ISM					s	s	s			s			s						
	08DU7	08DU7-1 (MS/MSD)	0-0.66	ISM					s	s	s			s			s						ISM 08DU7 comprised 30 aliquots per replicate Fill material observed
		08DU7-2	0-0.66	ISM					s	s	s			s			s						
		08DU7-3	0-0.66	ISM					s	s	s			s			s						
	08SB1	08SB1-1 (FD: 08SB1-10)	0-1	Discrete SS	To assess perimeter soil			s		s	s			s			s						No evidence of contamination was observed; therefore, the samples were collected from 0 - 1 foot
		08SB1-2 (FD: 08SB1-20)	2-3	Discrete	Vertical extent of COIs previously documented in respective borings					s	s	s		s			s						0-2' was concrete; therefore, the samples were collected from 2-3'. No evidence of contamination observed
	08SB2	08SB2-1	0-1	Discrete SS	To assess perimeter soil			s		s	s			s			s						No evidence of contamination was observed; therefore, the samples were collected from 0 - 1 foot
	08SB3	08SB3-1	0-1	Discrete SS				s		s	s			s			s						
		08SB4-1	0-1	Discrete SS				s		s	s			s			s						
	08SB4	08SB4-2	1-3	Discrete	Vertical extent of COIs previously documented in respective borings					s	s	s		s			s						Clinker observed at 7" Refusal at 15' bgs due to density, sleeve crumpled and jammed Sample collected from 1-3 feet bgs
	08SB5	08SB5-1	0-1	Discrete SS	To assess perimeter soil			s		s	s			s			s						No evidence of contamination was observed; therefore, the samples were collected from 0 - 1 foot
		08SB5-2	1-3	Discrete	Vertical extent of COIs previously documented in respective borings					s	s	s		s			s						No evidence of contamination observed Sample collected from 1-3 feet bgs
	08SB6	08SB6-1	0-1	Discrete SS	To assess perimeter soil			s		s	s			s			s						No evidence of contamination was observed; therefore, the samples were collected from 0 - 1 foot, one (1) additional confirmatory soil boring was advanced to confirm refusal depth (08SB6A)
	08SB7	08SB7-1	0-1	Discrete SS				s		s	s			s			s						No evidence of contamination was observed; therefore, the samples were collected from 0 - 1 foot
	08SB8	08SB8-1	1-3	Discrete	To assess vertical extent of COIs					s	s	s		s			s						No evidence of contamination Sample collected from 1-3 feet bgs Refusal due to density
		08SB8-2	3-5	Discrete						s	s	s		s			s						No evidence of contamination observed; therefore, the sample was collected from 3-5 feet bgs Refusal due to density

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8 Incinerator #49 (cont.)	08SB9	08SB9-1	1-3	Discrete	To assess vertical extent of COIs				s	s	s			s			s						No evidence of contamination Sample collected from 1-3 feet bgs
		08SB9-2	3-5	Discrete					s	s	s			s			s						No evidence of contamination observed; therefore, the sample was collected from 3-5 feet bgs
	08SB10	08SB10-1	1-3	Discrete					s	s	s			s			s						Boring location moved 1-foot west due to proximity to tree No evidence of contamination Sample collected from 1-3 feet bgs
		08SB10-2	3-5	Discrete					s	s	s			s			s						Boring location moved 1-foot west due to proximity to tree No evidence of contamination observed; therefore, the sample was collected from 3-5 feet bgs
	08SB11	08SB11-1	1-3	Discrete	To assess vertical extent of COIs				s	s	s			s			s						No evidence of contamination Sample collected from 1-3 feet bgs
		08SB11-2	3-5	Discrete					s	s	s			s			s						No evidence of contamination observed; therefore, the sample was collected from 3-5 feet bgs
	08SB12	08SB12-1 (FD: 08SB12-10)	1-3	Discrete					s	s	s			s			s						No evidence of contamination Sample collected from 1-3 feet bgs
		08SB12-2	3-5	Discrete					s	s	s			s			s						No evidence of contamination observed; therefore, the sample was collected from 3-5 feet bgs
		08SB12-3	20-20.5/20	Discrete		s						s	s										PID reading of 14.93-57.03 ppm and olfactory evidence of petroleum at 50-56"; therefore, the sample was collected from 20-20.5/20 feet bgs.
	08SB13	08SB13-1 (FD: 08SB13-10)	1-3	Discrete					s	s	s			s			s						Metal observed at 17" Sample collected from 1-3 feet bgs
		08SB13-2	3-5	Discrete					s	s	s			s			s						No evidence of contamination observed; therefore, the sample was collected from 3-5 feet bgs
10 Disposal Area #14	10DU1	10DU1-SU1	0-1	ISM	To assess geophysical anomaly east of road				s	s	s	s					s						10DU1 comprised 3 SUs, each consisting of 30 0-1 foot aliquots
		10DU1-SU2	0-1	ISM					s	s	s	s					s						
		10DU1-SU3	0-1	ISM					s	s	s	s					s						
	10DU2	10DU2-SU1	0-0.66	ISM	To delineate the disposal area to the south where the slope changes and no disposal is suspected				s	s	s	s					s						10DU2 comprised 3 SUs, each consisting of 30 0-1 foot aliquots
		10DU2-SU2	0-0.66	ISM					s	s	s	s					s						
		10DU2-SU3	0-0.66	ISM					s	s	s	s					s						
	10DU3	10DU3-SU1	0-1	ISM	To assess average concentrations of upland surface soil between edge of slope and road				s	s	s	s		s			s				1-gallon resealable bag	1-8 oz glass (to be provided after ISM processing by ARA, provide three for MS/MSD)	
		10DU3-SU2 (MS/MSD)	0-1	ISM					s	s	s	s		s			s				1-gallon resealable bag		
		10DU3-SU3	0-1	ISM					s	s	s	s		s			s				1-gallon resealable bag		
		10DU3-SU4	0-1	ISM					s	s	s	s		s			s				1-gallon resealable bag		
	10SS-3	10SS-3	0-1	Discrete SS	Assess steep slope north of disposal area and incinerator (08DU4) where additional ISM is prohibited by vegetation and slope	s			s	s	s	s	s				s						Sample was collected from 0-1 foot bgs.
	10SS-4	10SS-4 (FD: 10SS-40)	0-1	Discrete SS		s			s	s	s	s	s				s						Sample was collected from 0-1 foot bgs.
	10SS-5	10SS-5	0-1	Discrete SS		s			s	s	s	s	s				s						Sample was collected from 0-1 foot bgs.
	10SS-6	10SS-6 (MS/MSD)	0-1	Discrete SS	To delineate the extent of contamination along the beach south of 10TP13	s			s	s	s	s	s				s						Sample was collected from 0-1 foot bgs.
	10SS-7	10SS-7	0-1	Discrete SS		s			s	s	s	s	s				s						Little glass observed. Sample was collected from 0-1 foot bgs.

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10 Disposal Area #14 (cont.)	10SB1	10SB1-1	11-13/12	Discrete	Vertical delineation and characterization of waste	s	s			s	s	s	s	s	s	s		s					One (1) additional confirmatory soil boring was advanced to assess horizontal delineation of waste (10SB1A). Sample collected from area of greatest contamination (PID response) which coincided with the 2-foot interval above the depth of refusal.
		10SB1-2	Not collected	NA		s	s			s	s	s	s	s	s	s		s					No additional evidence of contamination was observed; therefore, additional samples were not collected.
		10SB1-3	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB1-4	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB1-5	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
	10SB2/ 10OBMW1	10SB2-1	12.75-14.75/13.75	Discrete	Vertical delineation and characterization of waste	s	s			s	s	s	s	s	s	s		s					No contamination was observed; therefore, the sample was collected from the 2-foot interval above depth of refusal, Two (2) additional confirmatory soil borings were advanced to assess horizontal delineation of waste and the presence of overburden groundwater (10SB2A and 10SB2B).
		10SB2-2	Not collected	NA		s	s			s	s	s	s	s	s	s		s					No additional evidence of contamination was observed; therefore, additional samples were not collected.
		10SB2-3	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB2-4	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB2-5	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10OBMW1-mmyy	NC	Groundwater	To assess overburden groundwater impacts in the disposal area body of fill	w	w		w	w	w	w	w		w	w							No groundwater observed; therefore, monitoring well was not installed
	10SB3	10SB3-1 (FD: 10SB3-10)	2-4/3	Discrete	Vertical delineation and characterization of waste	s	s			s	s	s	s	s	s	s		s					Sample collected from area of greatest contamination (fill layer). Two (2) additional confirmatory soil borings were advanced to assess horizontal delineation of waste (10SB3A and 10SB3B).
		10SB3-2	10-12/11	Discrete		s	s			s	s	s	s	s	s	s		s					Sample collected from the two foot interval above the depth of refusal
		10SB3-3	Not collected	NA		s	s			s	s	s	s	s	s	s		s					No additional evidence of contamination was observed; therefore, additional samples were not collected.
		10SB3-4	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB3-5	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
	10SB4/ 10OBMW2	10SB4-1	10-12/11	Discrete	Vertical delineation and characterization of waste	s	s			s	s	s	s	s	s	s		s					Three (3) additional confirmatory soil borings were advanced to assess horizontal delineation of waste and the presence of overburden groundwater (10SB4A, 10SB4B, and 10SB4C). Sample collected from area of greatest contamination (fill layer) in second boring attempt (10SB4A).
		10SB4-2	15-17/16	Discrete	Vertical delineation and characterization of waste	s	s			s	s	s	s	s	s	s		s					Sample collected from area of greatest contamination (fill layer and PID response) in third boring attempt (10SB4B) which was coincidentally located within the two foot interval above the depth of refusal
		10SB4-3	Not collected	NA		s	s			s	s	s	s	s	s	s		s					No additional evidence of contamination was observed; therefore, additional samples were not collected.
		10SB4-4	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB4-5	Not collected	NA		s	s			s	s	s	s	s	s	s		s					

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10 Disposal Area #14 (cont.)	10SB4/ 10OBMW2 (cont.)	10OBMW2-0418	19.66	Groundwater	To assess overburden groundwater impacts in the disposal area body of fill	w	w		w	w	w	w	w		w	w							Installed into weathered bedrock using the CME 850 ATV hollow-stem auger drill rig in order to advance to depth of groundwater
		10OBMW2-1120	24	Groundwater	To assess seasonal variation of groundwater concentrations	w	w		w	w	w	w	w										
	10SB5	10SB5-1	11-13/12	Discrete	Vertical delineation and characterization of waste	s	s			s	s	s	s	s	s	s		s					Three (3) additional confirmatory soil borings were advanced to assess horizontal delineation of waste (10SB5A, 10SB5B, and 10SB5C). No evidence of contamination was observed; therefore, the sample was collected from the 2-foot interval above depth of refusal
		10SB5-2	Not collected	NA		s	s			s	s	s	s	s	s	s		s					No additional evidence of contamination was observed; therefore, additional samples were not collected.
		10SB5-3	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB5-4	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
		10SB5-5	Not collected	NA		s	s			s	s	s	s	s	s	s		s					
	10SB6	10SB6-1	0.5-2.5/1.5	Discrete	Generally assess the extent and characteristics of the debris and also the potential extent of nitroglycerin in GI-DA-SS-02-02	s			s	s	s	s	s			s	s		s				No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination; therefore, the sample was collected from 0.5-2.5/1.5 feet bgs
	10SB7	10SB7-1 (FD: 10SB7-10)	0.5-2.5/1.5	Discrete		s			s	s	s	s	s			s	s						No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination; therefore, the sample was collected from 0.5-2.5/1.5 feet bgs
	10SB8	10SB8-1	1-3/2	Discrete		s			s	s	s	s	s			s	s		s				No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination; therefore, the sample was collected from 1-3/2 feet bgs
	10SB9	10SB9-1	0.5-2.5/0.5	Discrete	Attempt to replicate prior highly elevated nitroglycerin result	s			s	s	s	s	s			s	s		s				Grey suspect material at 9" No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination; therefore, the sample was collected from 0.5-2.5/0.5 feet bgs. Prior investigation GI-DA-SS-02-02 with elevated nitroglycerin collected between 16-22"
	10SB10	10SB10-1	1-3/2	Discrete	Generally assess the extent and characteristics of the debris and also the potential extent of nitroglycerin in GI-DA-SS-02-02	s			s	s	s	s	s			s	s		s				No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination; therefore, the sample was collected from 1-3/2 feet bgs
	10SB11	10SB11-1	8-10/9	Discrete	Generally assess the extent and characteristics of the debris	s			s	s	s	s	s				s						No evidence of corrosion or blue/green staining (cyanide) Sample was collected from the 2-foot interval above refusal prior to alteration of sampling program based on observed soil conditions
	10SB12	10SB12-1	1-3/2	Discrete	Assess subsurface conditions east of the road in the geophysical anomaly area	s			s	s	s	s	s				s						No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination or geophysical anomaly; therefore, the sample was collected from 1-3/2 feet bgs
	10SB13	10SB13-1	1-3/2	Discrete		s			s	s	s	s	s				s						No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination or geophysical anomaly; therefore, the sample was collected from 1-3/2 feet bgs
	10SB14	10SB14-1	0-2/1	Discrete		s			s	s	s	s	s				s						No evidence of corrosion or blue/green staining (cyanide) No other evidence of contamination or geophysical anomaly; therefore, the sample was collected from 0-2/1 feet bgs

Table 1
Soil, Groundwater, Sediment, and Concrete Sample Summary
Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
10 Disposal Area #14 (cont.)	10TP1	10TP1-1	0-0.5/0.5	Discrete SS	Assessment of impacts to the beach and extent of previously observed tar-like material	s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample collected from entire test pit interval, no contamination observed
	10TP2/10PZ1	10TP2-1	0-0.5/0.5	Discrete SS		s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample collected from entire test pit interval, contamination (metal debris) observed
		10PZ1-mmyy	Not collected	NA		w	w		w	w	w	w	w		w	w							Test pit was hand-dug to only 0.5 feet bgs, which was not deep enough to install the piezometer
	10TP3	10TP3-1	Not collected	NA		s	s			s	s	s	s	s	s	s		s					No material between 10TP2 and 10TP4 to feasibly sample in the vicinity of the 10TP3; therefore, no sample was collected
	10TP4	10TP4-1	0-0.5/0.5	Discrete SS		s	s			s	s	s	s	s	s	s		s					Test pits were hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample collected from entire test pit interval, contamination (metal debris) observed
	10TP5/10PZ-2	10TP5-1	0-0.5/0.5	Discrete SS	Assessment of impacts to the beach and extent of previously observed tar-like material	s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug due to only 0.5 feet bgs; therefore, an additional sample was not collected
		10TP5-2	Not collected	NA		s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug to only 0.5 feet bgs, which was not deep enough to install the piezometer
		10PZ2-mmyy	Not collected	NA		w	w		w	w	w	w	w		w	w							Sample was collected from area of greatest contamination (metal debris)
	10TP6	10TP6-1	0-2/1	Discrete		s	s			s	s	s	s	s	s	s		s					Sample was collected from area of greatest contamination (petroleum odor, staining, PID response, and metal debris)
	10TP7	10TP7-1	0-2/1	Discrete		s	s			s	s	s+	s+	s	s	s		s					Sample was collected from area of greatest contamination (petroleum odor, staining, and PID response)
	10TP8/ 10PZ3	10TP8-1 (FD: 10TP8-10)	0-2/1	Discrete		s	s			s	s	s+	s+	s	s	s		s					Sample was not collected from deeper interval due to shallow petroleum contamination draining to deeper soils within the test pit
		10TP8-2	Not collected	NA		s	s			s	s	s	s	s	s	s		s					The pump intake depth was adjusted during sampling and the field duplicate 10PZ30-0418 was only analyzed for pesticides and explosives due to piezometer drawdown caused by the falling tide. Piezometer has since been destroyed by ocean action.
		10PZ3-0418 FD: 10PZ30-0418)	1.13-2.12	Groundwater		w	w		w	w	w	w	w		w	w							Test pit was hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample was collected from area of greatest contamination (fill layer, petroleum odor, and PID response)
	10TP9	10TP9-1	0-2/2	Discrete		s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample was collected from entire test pit interval, no evidence of contamination observed
	10TP10	10TP10-1	0-1.75/1.75	Discrete		s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample was collected from entire test pit interval, some fill observed
	10TP11	10TP11-1	0-2/1	Discrete		s	s			s	s	s	s	s	s	s		s					

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Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservativ es for Alpha - Blue (per sample)	Notes
10 Disposal Area #14 (cont.)	10TP12/ 10PZ4	10TP12-1	0-1.75/1.75	Discrete	Assessment of impacts to the beach and extent of previously observed tar-like material	s	s			s	s	s	s	s	s	s		s					Test pit was hand-dug due to concerns of unearthed petroleum-contamination migrating into the nearby bay water, sample was collected from entire test pit interval, some metal debris observed
		10PZ4-mmyy	Not collected	NA		w	w		w	w	w	w	w		w	w							Test pit was hand-dug to only 1.75 feet bgs, which was not deep enough to install the piezometer
	10TP13	10TP13-1	0-2/1	Discrete		s	s			s	s	s	s	s	s	s		s					No contamination was observed; therefore, the sample was collected from the surface for consistency with the remaining samples
	10TP14	10TP14-1	0-2	Discrete		s			s	s	s	s	s				s						Located as close as possible to lip of disposal area slope. No evidence of contamination. End of 5'x10' test pit at 6.5 feet bgs.
	10TP15	10TP15-1 (FD: 10TP15-10)	3-5	Discrete		s			s	s	s	s	s				s		s				Immediately adjacent to tar debris at lip of disposal area slope. Tar and asphalt roofing at surface. Creosote odor upon disturbance. 3-5 feet bgs: Reddish rusty debris, (possible incinerator waste: metal, glass, some slag, warped glass), bricks, wire, crushed concrete, white chalky substance. 5-8 feet bgs: Gray-rusty with debris (same as above) End of 6'x10' test pit at 8 feet bgs.
	10TP16	10TP16-1	0-3	Discrete		s			s	s	s	s	s				s		s				Many pipes were observed in first attempted test pit. Moved closer to lip of disposal area slope. 0-3 feet bgs: Western edge has wedge of rusty debris at surface that pinches out east. 5-6 feet bgs: Rusty layer, approximately 1-foot thick on east sidewall. 0-9 feet bgs: Occasional pipe, wood, CMU block End of 5'x11' test pit at 9 feet bgs.
	10TP17	10TP17-1	0-3	Discrete		s			s	s	s	s	s				s						Southernmost test pit at edge of visual debris lobe. Transite observed near surface. 0-3 feet bgs: Reddish-gray debris on western sidewall (metal, brick, cobbles, trace rusty soil) End of 4'x11' test pit at 9 feet bgs.
	10SD1	10SD1 (2018)	0-0.5	Sediment	Assess the extent of previously confirmed impacts to sediment	s	s		s	s	s	s	s	s	s	s		s					Samples were collected during low tide from 0-6 inches
		10SD1 (2020)	0-0.5	Sediment													s			s			Original location mostly large pebbles with poor recovery. Sample location offset a few feet closer to shore to obtain enough sample volume. Sample collected from 0-0.5 feet bgs using hand auger.
	10SD2	10SD2 (2018)	0-0.5	Sediment		s	s		s	s	s	s	s	s	s	s		s					Samples were collected during low tide from 0-6 inches
		10SD2 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample collected from 0-0.5 feet bgs using hand auger.
	10SD3	10SD3 (2018)	0-0.5	Sediment	Prior sample locations revisited in 2020 to add dioxin analysis	s	s		s	s	s	s	s	s	s	s		s					Samples were collected during low tide from 0-6 inches
		10SD3 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample collected from 0-0.5 feet bgs using hand auger.
	10SD4	10SD4S (2018)	0-0.5	Sediment		s	s		s	s	s	s	s	s	s	s		s					Samples were collected during low tide from 0-6 inches
		10SD4 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample collected from 0-0.5 feet bgs using hand auger.
		10SD4D	Not collected	NA		s	s		s	s	s	s	s	s	s	s		s					Sediment was not observed deeper than 0.5 feet bgs and auger refusal occurred 0.5 feet bgs; therefore, no sample was collected

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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
10 Disposal Area #14 (cont.)	10SD5	10SD5S (2018)	0-0.5	Sediment	Assess the extent of previously confirmed impacts to sediment Prior sample locations revisited in 2020 to add dioxin analysis	s	s		s	s	s	s	s	s	s	s		s					Sample was collected during low tide from 0-6 inches
		10SD5 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample had dark sludge-like appearance (likely seaweed and decaying organics). Sample collected from 0-0.5 feet bgs using hand auger.
		10SD5D (FD: 10SD50D)	0.5-1	Sediment		s	s		s	s	s	s	s	s	s	s		s					Field duplicate moved from 10SD7D to 10SD5D because no evidence of contamination was observed at 10SD7D, but metal debris was observed on the ground surface near 10SD5
	10SD6	10SD6S (2018)	0-0.5	Sediment		s	s		s	s	s	s	s	s	s	s		s					Sample was collected during low tide from 0-6 inches
		10SD6 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample had dark sludge-like appearance (likely seaweed and decaying organics). Sample collected from 0-0.5 feet bgs using hand auger.
		10SD6D	Not collected	NA		s	s		s	s	s	s	s	s	s	s		s					No evidence of contamination was observed at 10SD6 and sediment was not observed deeper than 0.5 feet bgs; therefore, no sample was collected
	10SD7	10SD7S (2018)	0-0.5	Sediment		s	s		s	s	s	s	s	s	s	s		s					Sample was collected during low tide from 0-6 inches
		10SD7 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample had dark sludge-like appearance (likely seaweed and decaying organics). Sample collected from 0-0.5 feet bgs using hand auger.
		10SD7D	Not collected	NA		s	s		s	s	s	s	s	s	s	s		s					No evidence of contamination was observed; therefore, sample was not collected
	10SD8	10SD8 (2018)	0-0.5	Sediment		s	s		s	s	s	s	s	s	s	s		s					Sample was collected during low tide from 0-6 inches
		10SD8 (2020)	0-0.5	Sediment													s			s			Revisited to add dioxin analysis. Sample collected from 0-0.5 feet bgs using hand auger.
	10SD9	10SD9 (2018)	Not collected	NA	Assess the extent of previously confirmed impacts to sediment Prior sample locations revisited in 2020 to confirm prior concentrations with improved sampling methodology	s	s		s	s	s	s	s	s	s	s		s					Samples were collected, but not analyzed. Not considered representative.
		10SD9 (2020)	0-0.5	NA					s	s	s						s			s			
	10SD10	10SD10 (2018)	Not collected	NA		s	s		s	s	s	s	s	s	s	s		s					Samples were collected, but not analyzed. Not considered representative.
		10SD10 (2020)	0-0.5	NA					s	s	s						s			s			
	10SD11	10SD11 (2018)	NA	Sediment		s	s		s	s	s	s	s	s	s	s		s					Samples were collected from the surface of the seafloor with ponar sampler
		10SD11 (2020)	0-0.5	Sediment					s	s	s						s			s			
	10SD12	10SD12 (2018)	NA	Sediment		s	s		s	s	s	s	s	s	s	s		s					Samples were collected from the surface of the seafloor with ponar sampler
		10SD12 (2020)	0-0.5	Sediment					s	s	s						s			s			
	10SD13	10SD13 (2018)	NA	Sediment		s	s		s	s	s	s	s	s	s	s		s					Samples were collected from the surface of the seafloor with ponar sampler
		10SD13 (2018)	0-0.5	Sediment					s	s	s						s			s			
	10SD14	10SD14 (2018)	NA	Sediment		s	s		s	s	s	s	s	s	s	s		s					Samples were collected from the surface of the seafloor with ponar sampler
		10SD14 (2020)	0-0.5	Sediment					s	s	s						s			s			

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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
10 Disposal Area #14 (cont.)	10SD15	10SD15 (2018)	Not collected	NA	Assess the extent of previously confirmed impacts to sediment	s	s		s	s	s	s	s	s	s	s		s					Due to a rocky seafloor, staff was unable to collect sediment with ponar sampler in the area of 10SD15; therefore, no sample was collected
		10SD15 (2020)	0-0.5	Sediment	Prior sample locations revisited in 2020 to confirm prior concentrations with improved sampling methodology				s	s	s						s			s			
	10SD16	10SD16	0-0.5	Sediment	Assess the migration of COIs into the bay				s	s	s						s			s			Original location mostly shells and pebbles with poor recovery. Sample location offset a few feet closer to shore to obtain enough sample volume. Sample collected from 0-0.5 feet bgs using hand auger.
	10SD17	10SD17	0-0.5	Sediment					s	s	s						s			s			Sample collected from 0-0.5 feet bgs using hand auger.
	10SD18	10SD18 (MS/MSD)	0-0.5	Sediment					s	s	s						s			s			Dark black portions of sediment. Attributed to decaying organics/no olfactory evidence of contamination. Sample collected from 0-0.5 feet bgs using hand auger.
	10SD19	10SD19	0-0.5	Sediment					s	s	s						s			s			Sample collected from 0-0.5 feet bgs using hand auger.
	10SD20	10SD20 (FD: 10SD200)	0-0.5	Sediment					s	s	s						s			s			
	10SD21	10SD21	0-0.5	Sediment					s	s	s						s			s			
	10SD22	10SD22	0-0.5	Sediment					s	s	s						s			s			
	10SD23	10SD23	0-0.5	Sediment					s	s	s						s			s			
	10SD24	10SD24 (MS/MSD)	0-0.5	Sediment					s	s	s						s			s			
	10SD25	10SD25	0-0.5	Sediment					s	s	s						s			s			
	10SD26	10SD26	0-0.5	Sediment					s	s	s						s			s			
	10SD27	10SD27	0-0.5	Sediment					s	s	s						s			s			
	10SD28	10SD28 (FD: 10SD280)	0-0.5	Sediment					s	s	s						s			s			
	10SD29	10SD29	0-0.5	Sediment					s	s	s						s			s			
	10SD30	10SD30	0-0.5	Sediment					s	s	s						s			s			
	10SD31	10SD31	0-0.5	Sediment					s	s	s						s			s			
	10SD32	10SD32	0-0.5	Sediment					s	s	s						s			s			
	10SD33	10SD33	0-0.5	Sediment					s	s	s						s			s			
	10SD34	10SD34	0-0.5	Sediment					s	s	s						s			s			
	10SD35	10SD35 (FD: 10SD350)	0-0.5	Sediment					s	s	s						s			s			
	10SD36	10SD36	0-0.5	Sediment					s	s	s						s			s			
	10SD37	10SD37	0-0.5	Sediment					s	s	s						s			s			
	10SD38	10SD38	0-0.5	Sediment					s	s	s						s			s			
	10SD39	10SD39	0-0.5	Sediment					s	s	s						s			s			
	10SD40	10SD40	0-0.5	Sediment					s	s	s						s			s			
	10SD41	10SD41	0-0.5	Sediment					s	s	s						s			s			
	10SD42	10SD42	0-0.5	Sediment					s	s	s						s			s			

Table 1 Soil, Groundwater, Sediment, and Concrete Sample Summary Gould Island Site Narragansett Bay, Jamestown, Rhode Island																								
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11 Quonset/ Maintenance Shops	11DU1	11DU1-1	0-1	ISM	Assessment of heating and maintenance related impacts		s			s	s	s										ISM 11DU1 comprised 30 aliquots per replicate		
		11DU1-2	0-1	ISM			s			s	s	s												
		11DU1-3	0-1	ISM			s			s	s	s												
		11SS-1	Not collected	NA		s	s			s	s	s	s								With the exception of trace clinker observed on the ground surface, no evidence of contamination was observed; therefore, no surface soil samples were collected			
		11SS-2	Not collected	NA		s	s			s	s	s	s											
	11SS-3	Not collected	NA	s	s			s	s	s	s													
	11OBMW1	11OBMW1-0422	Screened interval above bedrock	Groundwater	To assess potential groundwater impacts from Quonset hut fuel storage in ASTs	w			w			w	w								4-40 mL VOA (HCl) 1 - 1L amber 1 - 1 L amber (HCl)			
11OBMW2	11OBMW2-0422	Screened interval above bedrock	Groundwater		w			w			w	w								4-40 mL VOA (HCl) 1 - 1L amber 1 - 1 L amber (HCl)				
12 Maintenance Shop/ Garage Fire Station	Spilled Transformer trench (12SS)	12SS-1 (2021)	0	Discrete	Assessment of extent of spilled transformer contents, collected from trench, no other soil present above slab near transformer									s								Collected during 2021 BDDR		
		12SS-2 (2021)	0	Discrete										s								Collected during 2021 BDDR		
		12SS-3 (2021) (FD: 12SS-30)	0	Discrete											s								Collected during 2021 BDDR	
		12SS-4 (2021)	0	Discrete											s								Collected during 2021 BDDR	
		12SS-5 (2021)	0	Discrete											s								Collected during 2021 BDDR	
		12SS-6 (2022)	0	Discrete											s							1 - 4 oz glass		
		12SS-7 (2022)	0	Discrete											s							1 - 4 oz glass		
		12SS-8 (2022)	0	Discrete											s							1 - 4 oz glass		
		12SS-1 (2018)	Not collected	NA										s**										
		12CC-1	Not collected	NA										s**										
		12SS-2 (2018)	Not collected	NA										s**										
		12CC-2	Not collected	NA										s**										
		12SS-3 (2018)	Not collected	NA										s**										
		12CC-3	Not collected	NA										s**										
		12SS-4 (2018)	Not collected	NA										s**										
		12CC-4	Not collected	NA										s**										
		12SS-5 (2018)	Not collected	NA										s**										
		12CC-5	Not collected	NA										s**										
		12SS-6 (2018)	Not collected	NA										s**										
		12CC-6	Not collected	NA										s**										
		12SS-7 (2018)	Not collected	NA										s**										
		12CC-7	Not collected	NA										s**										
		12SS-8 (2018)	Not collected	NA										s**										
		12CC-8	Not collected	NA										s**										
		12SS-9 (2018)	Not collected	NA										s**										
		12CC-9	Not collected	NA										s**										

Table 1
Soil, Groundwater, Sediment, and Concrete Sample Summary
Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
12 Maintenance Shop/ Garage Fire Station (cont.)	12SB1/ 12OBMW1	12SB1-1	6-8/7	Discrete	To assess impacts from the vehicle maintenance pit	s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, the sample was collected from the groundwater interface, one (1) additional confirmatory soil boring was advanced to confirm refusal depth (12SB1A).
		12OBMW1-0418	12.74	Groundwater		w	w		w	w	w	w	w	w									Due to slight drawdown in well, the pump intake depth was lowered from 11.24 feet bgs to 12.74 feet bgs.
		12OBMW1-mmyy	NA	Groundwater																			Not sampled, well dry in November 2020
		12OBMW1-0422	12	Groundwater		w			w			w	w								4 - 40 mL VOA (HCl) 1 - 1L amber 1 - 1 L L amber (HCl)		
	Maintenance pit sludge/debris	12W-1	Not collected	NA		s	s			s	s	s	s	s									The maintenance pit was not located; therefore, no samples were collected
		12W-2	Not collected	NA		s	s			s	s	s	s	s									
		12W-3	Not collected	NA		s	s			s	s	s	s	s									
	12SB2	12SB2-1	7.5-9.5/8.5	Discrete	To assess around suspected UST	s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, the sample was collected from the groundwater interface, Two (2) additional confirmatory soil borings were advanced to confirm refusal depth (12SB2A and 12SB2B).
	12SB3/ 12OBMW2	12SB3-1	9-11/10	Discrete		s	s			s	s	s	s	s									Sample was collected from the area of greatest contamination (PID response and petroleum odor)
		12OBMW2-0418	11.6	Groundwater		w	w		w	w	w	w	w	w									12OBMW2 was moved from 12SB2 to 12SB3 due to the lack of sufficient groundwater at 12SB2 and observed contamination in 12SB3.
		12OBMW2- mmyy	NA	Groundwater																			Not sampled, well dry in November 2020
		12OBMW2- 0422 (FD: 12OBMW20-0422)	11.6	Groundwater		w			w			w	w								8 - 40 mL VOA (HCl) 2 - 1L amber 2 - 1 L L amber (HCl)		
	12SB4	12SB4-1	9-10/11	Discrete		s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, the sample was collected from the groundwater interface
	12SB5	12SB5-1 (MS/MSD)	15-17/16	Discrete	Further assess the extent of evidence of a release in 12SB3	s			s			s	s										No evidence of contamination observed; therefore, the sample was collected from the groundwater interface at 15-17/16 feet bgs.
	12SB6	12SB6-1	15-17/16	Discrete		s			s			s	s										No evidence of contamination observed; therefore, the sample was collected from the groundwater interface at 15-17/16 feet bgs.
	12SB7	12SB7-1	18-20/20	Discrete		s			s			s	s										Olfactory evidence of petroleum and PID reading of 84.733 ppm from 19-20 feet bgs; therefore, the sample was collected from 18-20/20 feet bgs. Headspace reading of 54.904 ppm. Groundwater at 15 feet bgs.
	12SB8	12SB8-1 (FD: 12SB8-10)	Pit Sludge (1-2/1.5)	Discrete	To assess sludge and oil debris at the boiler room sump	s	s			s	s	s	s	s							4 - 4 oz amber 4 - 40 mL VOA (methanol)		Sump found to be lined with concrete
		12SB8-2 (FD: 12SB8-20)	11-13/12	Discrete		s	s			s	s	s	s	s							2 - 4 oz amber 2 - 40 mL VOA (methanol)		Sample depth adjusted to greatest PID response and petroleum odor
	12SB9	12SB9-1	Pit Sludge	Discrete	to assess sludge and oil debris in the vehicle maintenance pit	s	s			s	s	s	s	s							2 - 4 oz amber 2 - 40 mL VOA (methanol)		Maintenance pit found to be lined with concrete
		12SB9-2	6.5-7.5/7	Discrete		s	s			s	s	s	s	s							2 - 4 oz amber 2 - 40 mL VOA (methanol)		
	12SB10	12SB10-1	0-1/0.5	Discrete	To assess beneath the slab downgradient of boiler room	s	s			s	s	s	s	s							2 - 4 oz amber 2 - 40 mL VOA (methanol)		If no evidence of contamination, from groundwater interface, or beneath slab if no groundwater is present.
		12SB10-2 (MS/MSD)	12-14/13	Discrete		s	s			s	s	s	s	s							6 - 4 oz amber 6 - 40 mL VOA (methanol)		
	12SB11	12SB11-1	0.5-2.5/1.5	Discrete		s	s			s	s	s	s	s							2 - 4 oz amber 2 - 40 mL VOA (methanol)		If no evidence of contamination, from groundwater interface, or beneath slab if no groundwater is present.
		12SB11-2	13-15/14	Discrete		s	s			s	s	s	s	s							2 - 4 oz amber 2 - 40 mL VOA (methanol)		

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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservativ es for Alpha - Blue (per sample)	Notes
13 Electric Substation/ Transformer Pad	Concrete pads	13CC-1	0-0.04	Concrete	To assess impacts to concrete transformer pads									s**									Samples were collected from concrete transformer pads or floors directly adjacent to transformers, no evidence of staining was observed
		13CC-2	0-0.04	Concrete										s**									
		13CC-3	0-0.04	Concrete										s**									
		13CC-4	0-0.04	Concrete										s**									
		13CC-5	0-0.04	Concrete										s**									
		13CC-6	0-0.04	Concrete										s**									
		13CC-7	0-0.04	Concrete										s**									
		13CC-8	0-0.04	Concrete										s**									
		13CC-9	0-0.04	Concrete										s**									
		13CC-10	0-0.04	Concrete										s**									
		13CC-11	0-0.04	Concrete										s**									
		13CC-12	0-0.04	Concrete										s**									
		13CC-13	0-0.04	Concrete										s**									
		13CC-14	0-0.04	Concrete										s**									
		13CC-15	0-0.04	Concrete										s**									
		13CC-16	0-0.04	Concrete										s**									
		13CC-17	0-0.04	Concrete										s**									
		13CC-18	0-0.04	Concrete										s**									
		13CC-19	0-0.04	Concrete										s**									
		13CC-20	0-0.04	Concrete										s**									
		13CC-21	0-0.04	Concrete										s**									
		13CC-22	0-0.04	Concrete										s**									
		13CC-23	0-0.04	Concrete										s**									
		13CC-24	0-0.04	Concrete										s**									
		13CC-25	0-0.04	Concrete										s**									
		13CC-26	0-0.04	Concrete										s**									
		13CC-27	0-0.04	Concrete										s**									
	Soil surrounding pad	13SS-3	0-0.5	Discrete SS	To assess impacts surrounding transformer pads					s	s	s	s	s									Samples were collected from surface soil adjacent to transformer concrete pads
		13SS-4	0-0.5	Discrete SS						s	s	s	s	s									
		13SS-5	0-0.5	Discrete SS						s	s	s	s	s									
		13SS-6	0-0.5	Discrete SS						s	s	s	s	s									
		13SS-7	0-0.5	Discrete SS						s	s	s	s	s									
		13SS-8	0-0.5	Discrete SS						s	s	s	s	s									Sample was collected from soil beneath a transformer oil reservoir located on the ground surface.

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13 Electric Substation/Transformer Pad (cont.)	13DU1 (2020)	13DU1-SU1	Not collected	NA	To assess the mean concentrations of PCBs surrounding the former transformer pad and extending west				s			s		s									Decision unit eliminated from sampling program. Will be replaced with ISM sample from stockpile (13DUSP-1, -2, and -3) and surface soil samples from beneath gravel layer.	
		13DU1-SU2	Not collected	NA					s			s		s										
		13DU1-SU3	Not collected	NA					s			s		s										
		13DU1-SU4	Not collected	NA					s			s		s										
	13DU2 (2020)	13DU2-SU1	Not collected	NA	To assess the mean concentration of PCBs extending west from the transformer pad and 13SS3				s			s		s									Decision unit eliminated from sampling program. Will be replaced with ISM sample from stockpile (13DUSP-1, -2, and -3) and surface soil samples from beneath gravel layer.	
		13DU2-SU2	Not collected	NA					s			s		s										
		13DU2-SU3	Not collected	NA					s			s		s										
	13DU1	13DU1-1	0-1	ISM	To assess the mean concentrations of PAHs surrounding the transformer pen				s	s	s	s		s								1-gallon resealable bag		
		13DU1-2 (MS/MSD)	0-1	ISM					s	s	s	s		s								1-gallon resealable bag		
		13DU1-3	0-1	ISM					s	s	s	s		s								1-gallon resealable bag		
	13DU2	13DU2-1	0-1	ISM					s	s	s	s		s								1-gallon resealable bag		
		13DU2-2	0-1	ISM					s	s	s	s		s								1-gallon resealable bag		
		13DU2-3	0-1	ISM					s	s	s	s		s								1-gallon resealable bag		
	13DUSP	13DUSP-1	Stockpile Surface	ISM	To assess the fines associated with the stockpiled gravel in the transformer pad				s			s		s									13DUSP comprised three replicates, each consisting of 30 aliquots collected by sieving the gravel and collecting the fines for the sample	
		13DUSP-2	Stockpile Surface	ISM					s			s		s										
		13DUSP-3	Stockpile Surface	ISM					s			s		s										
	13SB1	13SB1-1	0.5-2/0.5	Discrete	To assess the vertical extent of PCBs in the transformer yard	s			s			s		s										No evidence of contamination was observed; therefore, the sample was collected from 0.5-2/0.5 feet bgs.
		13SB1-2	2-4/2	Discrete		s			s			s		s										No evidence of contamination was observed; therefore, the sample was collected from 2-4/2 feet bgs.
	13SB2	13SB2-1	1-2/1	Discrete		s			s			s		s										No evidence of contamination was observed; therefore, the sample was collected from 1-2/1 feet bgs.
		13SB2-2	2-4/2	Discrete		s			s			s		s										No evidence of contamination was observed; therefore, the sample was collected from 2-4/2 feet bgs.
	13SB3	13SB3-1	0-1	Discrete SS								s		s										Sampled from top 12 inches of native soil under gravel layer
	13SB4	13SB4-1	0-1	Discrete SS								s		s										
	13SB5	13SB5-1	0-1	Discrete SS								s		s										
	13SB6	13SB6-1	0-1	Discrete SS								s		s										
	13SB7	13SB7-1	0-1	Discrete SS								s		s										
	13SB8	13SB8-1	0-1	Discrete SS								s		s										
	13SB9	13SB9-1	0.25-1.25	Discrete SS								s		s										Sampled from top 12 inches of native soil under gravel layer (0.25-1.25 feet bgs)
13SB10	13SB10-1	0-1	Discrete SS								s		s										Sampled from top 12 inches of native soil under gravel layer	
13SB11	13SB11-1	1-2	Discrete	To vertically delineate PAHs in 13DU1				s	s	s	s		s								2- 4 oz glass			
13SB12	13SB12-1	1-2	Discrete					s	s	s	s		s								2- 4 oz glass			
13SB13	13SB13-1	1-2	Discrete					s	s	s	s		s								2- 4 oz glass			
13SB14	13SB14-1	1-2	Discrete	To vertically delineate PAHs in 13DU2				s	s	s	s		s								2- 4 oz glass			
13SB15	13SB15-1	1-2	Discrete					s	s	s	s		s								2- 4 oz glass			

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16 Barracks	Buried Transformer Area	16T-1 (FD: 16T-10)	0-0.5	Discrete SS	To assess impacts to environmental matrix surrounding each transformer							s	s	s**									Samples were collected from surface soil beneath transformers 1 and 2
		16T-2	0-0.5	Discrete SS								s	s	s**									
		16SL-1	NA	Sludge								s	s	s**									Sample was collected from sludge at bottom of manhole where transformer 3 was located
		16WG-1	NA	Stormwater								s	s	s**									Sample was collected from the stormwater inside the manhole where transformer 3 was located
		16T-3	Not collected	NA								s	s	s**									Transformer 3 was located inside of a manhole; therefore, sample was replaced with above sludge and stormwater samples.
		16SS-1	0-0.5	Discrete SS	Assessment of extent of spilled transformer contents							s	s	s**									Samples were collected in a 3 meter grid pattern surrounding transformer 1 (see 16T-1) in accordance with 40 CFR 761.265
		16SS-2	0-0.5	Discrete SS								s	s	s**									
		16SS-3	0-0.5	Discrete SS								s	s	s**									
		16SS-4	0-0.5	Discrete SS								s	s	s**									
		16SS-5	0-0.5	Discrete SS								s	s	s**									
		16SS-6	0-0.5	Discrete SS								s	s	s**									
		16SS-7	0-0.5	Discrete SS								s	s	s**									
		16SS-8	0-0.5	Discrete SS								s	s	s**									Samples were collected in a 3 meter grid pattern surrounding transformer 2 (see 16T-2) in accordance with 40 CFR 761.266
		16SS-9	0-0.5	Discrete SS								s	s	s**									
		16SS-10	0-0.5	Discrete SS								s	s	s**									
		16SS-11	0-0.5	Discrete SS								s	s	s**									
		16SS-12	0-0.5	Discrete SS								s	s	s**									
		16SS-13	0-0.5	Discrete SS								s	s	s**									
		16SS-14	0-0.5	Discrete SS								s	s	s**									
		16SS-15	0-0.5	Discrete SS								s	s	s**									
		16SS-16	0-0.5	Discrete SS								s	s	s**									
	16SBT1	16SBT1-1	0.5-2/0.5	Discrete	To assess the vertical extent of PCBs beneath transformers T1 and T2	s			s					s									No evidence of contamination was observed; therefore, the sample was collected from 0.5-2/0.5 feet bgs.
		16SBT1-2	2-4/2	Discrete		s			s					s									No evidence of contamination was observed; therefore, the sample was collected from 2-4/2 feet bgs.
	16SBT2	16SBT2-1	0.5-2/0.5	Discrete		s			s					s									No evidence of contamination was observed; therefore, the sample was collected from 0.5-2/0.5 feet bgs.
		16SBT2-2	2-4/2	Discrete		s			s					s									No evidence of contamination was observed; therefore, the sample was collected from 2-4/2 feet bgs.
19 Torch Pot Storage #51	19DU1	19DU1-1 (FD: 19DU1-10)	0-1	Discrete SS	Confirm soil concentrations in vicinity of drum							s											ISM 19DU1 comprised 30 aliquots per replicate
		19DU1-2	0-1	Discrete SS								s											
		19DU1-3	0-1	Discrete SS								s											

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21 Bunker #11	21DU1	21DU1-1	0-0.66	ISM	To assess the sidewall of the bunker where demolition debris remains				s	s	s	s					s						21DU1 comprised 30 0-0.66 foot aliquots per replicate Trace clinker observed
		21DU1-2	0-0.66	ISM					s	s	s	s					s						Olfactory and slight visual evidence of petroleum contamination observed in increment in southwest corner of 21 Bunker #11 at base of gulley (21SS-4) Samples contain some bunker debris
		21DU1-3	0-0.66	ISM					s	s	s	s					s						
	21DU2	21DU2-1	0-0.66	ISM	To assess the sidewall of the bunker that appears to be native soil				s	s	s	s					s						21DU2 comprised 30 0-0.66 foot aliquots per replicate
		21DU2-2	0-0.66	ISM					s	s	s	s					s						
		21DU2-3	0-0.66	ISM					s	s	s	s					s						
	Within bunker #11	21SS-3 (2018)	Not collected	NA	To assess within bunker for impacts associated with use as a firing range and possible releases from stored drums within the bunker	s	s			s	s	s	s	s	s	s							Due to debris within the bunker area, the sample locations were inaccessible; therefore, no samples were collected
		21SS-4 (2018)	Not collected	NA		s	s			s	s	s	s	s	s	s							
		21SS-5 (2018)	Not collected	NA		s	s			s	s	s	s	s	s	s							
		21SS-6 (2018)	Not collected	NA		s	s			s	s	s	s	s	s	s							
		21SS-7 (2018)	Not collected	NA		s	s			s	s	s	s	s	s	s							
		21SS-3 (2020)	Immediate surface	Discrete SS	To assess the sidewall of the bunker where demolition debris remains	s							s										Biased towards contamination Taken from behind remnant blocks of bunker wall where contaminants may accumulate.
		21SS-4 (2020)	Immediate surface	Discrete SS		s							s										Olfactory and slight visual evidence of petroleum contamination observed in southwest corner of 21 Bunker #11 at base of gulley
		21SS-5 (2020)	Immediate surface	Discrete SS		s							s										Biased towards contamination
		21SS-6 (2020)	Immediate surface	Discrete SS	To assess the sidewall of the bunker that appears to be native soil	s							s										Biased towards contamination
		21SS-7 (2020)	Immediate surface	Discrete SS		s							s										Not biased towards contamination
		21SS-8	Immediate surface	Discrete SS		s							s										Not biased towards contamination
	21SB1/ 21OBMW1	21SB1-1 (21SB1-10)	2-4/3	Discrete	To assess migration of contaminants possibly released to bunker	s	s			s	s	s	s	s	s	s							No evidence of contamination was observed; therefore, sample was collected from 2-foot interval above refusal depth
		21OBMW1-mmyy	Not collected	NA		w	w		w	w	w	w	w	w	w	w							No groundwater observed; therefore, monitoring well was not installed
	21SB2	21SB2-1	0-2/1	Discrete		s	s			s	s	s	s	s	s	s							No evidence of contamination or groundwater was observed; therefore, sample was collected from 2-foot interval above refusal depth
	21SB3	21SB3-1	12-14/13	Discrete		s	s			s	s	s	s	s	s	s							
	21SB4	21SB4-1	12-14/13	Discrete		s	s			s	s	s	s	s	s	s							No evidence of contamination or groundwater was observed; therefore, sample was collected from 2-foot interval above refusal depth. Two (2) additional confirmatory soil borings were advanced to confirm refusal depth (21SB5-A and 21SB5-B).
	21SB5	21SB5-1	10-12/10-11	Discrete		s	s			s	s	s	s	s	s	s							
	21SB6	21SB6-1	8-10/9	Discrete		s	s			s	s	s	s	s	s	s							No evidence of contamination or groundwater was observed; therefore, sample was collected from 2-foot interval above refusal depth

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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/AS310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
21 Bunker #11 (cont.)	21SB7	NA	Visual Only	NA	Visual observation of extent of debris in vertical bunker sidewall																		10-13.5 feet bgs observed as crushed graphite, not coal. Slight PID hit of 2.3 ppm and olfactory evidence of petroleum at 13.5 feet bgs, which was also depth of refusal.
	21SB8	NA	Visual Only	NA																			No evidence of debris. Refusal at bedrock at 11.5 feet bgs.
	21SB9	NA	Visual Only	NA																			Crushed concrete/suspect material at approximately 3-3.5 feet bgs. 10-11.5 feet bgs observed as crushed graphite, not coal. Refusal at 11.5 feet bgs.
	21SB10	NA	Visual Only	NA																			No evidence of debris. Refusal at bedrock at 12.5 feet bgs.
22 Bunker #12	22DU1	22DU1-1	0-0.66	ISM	To assess the sidewall of the bunker where demolition debris remains				s	s	s	s					s						22DU1 comprised 30 0-0.66 foot aliquots per replicate. Visual/olfactory evidence of petroleum (22SS-3). Tar like substance encountered at 8-12" at northwest corner of 22 Bunker #12, 3/4 way up slope. Numerous drums/containers in 22DU1 Samples contain some bunker debris
		22DU1-2	0-0.66	ISM					s	s	s	s					s						
		22DU1-3	0-0.66	ISM					s	s	s	s					s						
	22DU2	22DU2-1	0-0.66	ISM	To assess the sidewall of the bunker that appears to be native soil				s	s	s	s					s						22DU2 comprised of 30 0-0.66 foot aliquots per replicate
		22DU2-2	0-0.66	ISM					s	s	s	s					s						
		22DU2-3	0-0.66	ISM					s	s	s	s					s						
	Within bunker #12	22SS-3 (2018)	Not collected	NA	To assess within the bunker for impacts associated with possible release from drums stored within the bunker.	s	s			s	s	s	s	s	s	s							Due to debris within the sample area, sample locations were inaccessible; therefore, no samples were collected
		22SS-4 (2018)	Not collected	NA		s	s			s	s	s	s	s	s	s							
		22SS-5 (2018)	Not collected	NA		s	s			s	s	s	s	s	s	s							
		22SS-3 (2020)	Immediate surface	Discrete SS	To assess the sidewall of the bunker where demolition debris remains	s							s										Visual/olfactory evidence of petroleum (tar-like substance still able to run quite easily)
		22SS-4 (2020)	Immediate surface	Discrete SS		s							s										Visual/olfactory evidence of petroleum (residual black oily substance on bottom of crushed drum)
		22SS-5 (2020)	Immediate surface	Discrete SS		s							s										Biased towards contamination
		22SS-6	Immediate surface	Discrete SS		s							s										Biased towards contamination
		22SS-7	Immediate surface	Discrete SS	To assess the sidewall of the bunker that appears to be native soil	s							s										Not biased towards contamination
		22SS-8	Immediate surface	Discrete SS		s							s										Not biased towards contamination
	22SB1/ 22OBMW1	22SB1-1	4-6/5	Discrete	To assess migration of contaminants possibly released to bunker	s	s			s	s	s	s	s	s	s							No evidence of contamination or groundwater was observed; therefore, sample was collected from two foot interval above refusal depth, Two (2) additional confirmatory soil borings were advanced to confirm refusal depth (22SB1-A and 22SB1-B).
		22OBMW1-mmyy	Not collected	NA		w	w		w	w	w	w	w	w	w	w							No groundwater observed; therefore, monitoring well was not installed
		22SB2	22SB2-1	5-7/6		s	s			s	s	s	s	s	s	s							No evidence of contamination or groundwater was observed; therefore, sample was collected from 2-foot interval above refusal depth
		22SB3	22SB3-1	8-10/9		s	s			s	s	s	s	s	s	s							
		22SB4	22SB4-1	12-14/13		s	s			s	s	s	s	s	s	s							
		22SB5	22SB5-1	11-13/12		s	s			s	s	s	s	s	s	s							
		22SB6	22SB6-1	1-3/2		s	s			s	s	s	s	s	s	s							

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22 Bunker #12 (cont.)	22SB7	NA	Visual Only	NA	Visual observation of extent of debris in vertical bunker sidewall																		No evidence of debris. Refusal at 13 feet bgs. No recovery from 10-13 feet bgs (rocky)
	22SB8	NA	Visual Only	NA																			No evidence of debris. Refusal at 16 feet bgs.
	22SB9	NA	Visual Only	NA																			No evidence of debris. Refusal at bedrock at 12 feet bgs.
	22SB10	NA	Visual Only	NA																			Some debris (brick, concrete), trace coal observed at approximately 0.2-1.5 feet bgs. Some beige cementitious-like material observed at approximately 1.5-2 feet bgs and approximately 5-6 feet bgs. Refusal at 12 feet bgs.
	22SB11	NA	Visual Only	NA																			Some debris (brick, block) observed at approximately 0-0.6 feet bgs. Little coal observed at approximately 0.6-1.8 feet bgs. Refusal at 8 feet bgs.
23 Coal Storage South	23DU1	23DU1-1	0-1	ISM	Nature and extent of previously identified surface contamination			s		s	s	s											ISM 23DU1 comprised 30 aliquots per replicate
		23DU1-2	0-1	ISM				s		s	s	s											
		23DU1-3	0-1	ISM				s		s	s	s											
	23DU2	23DU2-1	0-1	ISM				s		s	s	s											ISM 23DU2 comprised 30 aliquots per replicate
		23DU2-2	0-1	ISM				s		s	s	s											
		23DU2-3	0-1	ISM				s		s	s	s											
	23DU3	23DU3-1	0-1	ISM	Further assess the horizontal extent of COIs				s	s	s												23DU3 comprised 30 0-1 foot aliquots per replicate Little coal observed
		23DU3-2	0-1	ISM					s	s	s												
		23DU3-3	0-1	ISM					s	s	s												
	23DU4	23DU4-1	0-1	ISM					s	s	s												23DU4 comprised 30 0-1 foot aliquots per replicate Little coal observed
		23DU4-2	0-1	ISM					s	s	s												
		23DU4-3	0-1	ISM					s	s	s												
	23SB1	23SB1-1	0-2	Discrete	Horizontal and vertical extent of coal in soil by visual examination			s		s	s	s											Sample collected from entire thickness of observed coal
		23SB1-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	23SB2	23SB2-1 (FD: 23SB2-10)	0-2	Discrete				s		s	s	s											Sample collected from entire thickness of observed coal
		23SB2-2 (2018)	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
		23SB2-2 (2020)	1.25-1.75	Discrete	Delineate COIs in native soil below coal				s	s	s												Coal observed between 0.1-1.25 feet bgs; therefore, the sample was collected from 1.25-1.75 feet bgs.
	23SB3	23SB3-1	0-1	Discrete SS	Horizontal and vertical extent of coal in soil by visual examination			s		s	s	s											Sample collected from entire thickness of observed coal
		23SB3-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	23SB4	23SB4-1 (FD: 23SB4-10)	0-2	Discrete				s		s	s	s											Sample collected from entire thickness of observed coal
		23SB4-2 (2018)	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
		23SB4-2 (2020)	1-1.5	Discrete	Delineate COIs in native soil below coal				s	s	s												Coal observed between 0.25-1 foot bgs; therefore, the sample was collected from 1-1.5 feet bgs.
	23SB5	23SB5-1	0-2	Discrete	Horizontal and vertical extent of coal in soil by visual examination			s		s	s	s											Sample collected from entire thickness of observed coal
		23SB5-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
		23SB5-2	1.2-1.9	Discrete	Delineate COIs in native soil below coal				s	s	s												Coal observed between approximately 0.4-1.2 feet bgs; therefore, the sample was collected from approximately 1.2-1.9 feet bgs.
		23SB5-3	2-3	Discrete					s	s	s												Sampled collected from 2-3 feet bgs using hand auger. Finer soils than were observed in adjacent soil boring using Geoprobe.

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23 Coal Storage South (cont.)	23SB6	23SB6-1	0-1	Discrete SS	Horizontal and vertical extent of coal in soil by visual examination			s		s	s	s											Sample collected from entire thickness of observed coal
		23SB6-2	Not collected	NA				s		s	s	s											Less than 4 feet of coal was encountered; therefore, the sample was not collected
	23SB7	23SB7-1	1-5	Discrete				s		s	s	s											No evidence of contamination was observed and this was the first boring advanced; therefore, the sample was collected from the shallow 4 foot interval of subsurface soil (1 to 5 feet bgs)
		23SB7-2	5-9	Discrete				s		s	s	s											No evidence of contamination was observed and this was the first boring advanced; therefore, the sample was collected from the deeper 4 foot interval of subsurface soil (5 to 9 feet bgs)
	23SB8	23SB8-1	0-2	Discrete				s		s	s	s											No evidence of contamination was observed; therefore, the sample was collected from 0 to 2 feet bgs (surface soil)
		23SB8-2	Not collected	NA				s		s	s	s											No evidence of contamination was observed; therefore, no additional samples were collected
	23SB9	23SB9-1	1-3	Discrete	Delineate COIs in native soil below coal				s	s	s												No coal was observed; therefore, the sample was collected from 1-3 feet bgs.
	23SB10	23SB10-1	0.6-1.2	Discrete					s	s	s												Coal observed between approximately 0.3-0.6 feet bgs; therefore, the sample was collected from 0.6-1.2 feet bgs.
		23SB10-2	1-2	Discrete					s	s	s												Sample collected from 1-2 feet bgs using hand auger.
	23SB11	NA	Visual Only	Discrete																			No coal or evidence of contamination observed. Refusal at bedrock at 12.5 feet bgs.
	23SB12	23SB12-1	2.6-3.4	Discrete					s	s	s												Coal observed from approximately 1.25-1.6 feet bgs; therefore, the sample was collected from approximately 1.7-2.2 feet bgs.
	23SB13	23SB13-1	2.4-2.9	Discrete					s	s	s												Coal observed from approximately 27-29 inches bgs; therefore, the sample was collected from approximately 2.4-2.9 feet bgs.
24 Cable Terminal Bldg #16	24DU1	24DU1-SU1	Not collected	ISM	To assess migration/tracking outside the building				s					s									Sampling unit on hold pending results of SU2 sample Not collected due to concrete from 0-1 foot bgs
		24DU1-SU2	0-0.66	ISM					s					s									24DU1-SU2 comprised 30 0 to 0.66 foot aliquots
		24DU1-SU3	Not collected	ISM					s					s									Sampling unit on hold pending results of SU2 sample Not collected due to concrete from 0-1 foot bgs
		24DU1-SU4	Not collected	ISM					s					s									Sampling unit on hold pending results of SU2 sample Not collected due to concrete from 0-1 foot bgs
	Transformer pad	24CC-1 (FD: 24CC-10)	0-0.04	Concrete	Assess impacts from former transformer									s**									Collected sample from top 0.5 inch of concrete transformer pad.
	Soil surrounding pad	24SS-2	0-0.5	Discrete SS								s	s	s**									Collected samples from top 6 inches on each side of the transformer pad. Samples collected from inside the building.
		24SS-3	0-0.5	Discrete SS								s	s	s**									
		24SS-4	0-0.5	Discrete SS								s	s	s**									
		24SS-5	0-0.5	Discrete SS								s	s	s**									
27 & 31 Three Presumed Gas Pits	Presumed gas pits 27	27SL-1 (FD: 27SL-10)	5.75-7.75/6.75	Sludge	Assess contents of presumed gas pits	s	s			s	s	s	s	s									The presumed gas pits at NED Site 27 were filled with gravel and soil; therefore, soil borings (27SL1 and 27SL2) were advanced to refusal within the gas pits. No evidence of contamination or groundwater was observed so no samples were collected. Soil borings (27SL1-A and 27SL2-A) were then advanced to refusal at a location adjacent to the pits in the presumed downgradient position in an attempt to detect any contamination which may have drained out of the pits. No evidence of contamination or groundwater was observed; therefore, the samples were collected from the 2-foot interval above the depth of refusal.
		27SL-2	5.83-7.83/6.83	Sludge		s	s			s	s	s	s	s									

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27 & 31 Three Presumed Gas Pits (cont.)	Presumed gas pit 31	31SL-1	2-4/3	Sludge		s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, sample was collected from the 2-foot interval above the refusal depth within the gas pit. This was not sampled outside the gas pit since a sample from what would have been that approximate depth was collected from 30SB1 just off the aviation pad to the east.	
	27SB1/ 27OBMW1	27SB1-1	5-7/6	Discrete	Assess possible release to subsurface	s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, the sample was collected from the groundwater interface	
		27OBMW1-0418	8.86	Groundwater	Assess impacts from gas pits as well as other NED Sites within the general aviation pad	w	w		w	w	w	w	w	w		w								Tidally influenced monitoring well
		27OBMW1-1120	11.80	Groundwater	Assess seasonal variation of groundwater concentrations	w	w		w	w	w	w	w											
	27SB2	27SB2-1	5.79-7.79/6.79	Discrete	Assess possible release to subsurface	s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, the sample was collected from the groundwater interface	
	31SB1/ 31OBMW1	31SB1-1	7.5-9.5/8.5	Discrete	Assess possible release to subsurface	s	s			s	s	s	s	s										Sample collected from the area of greatest contamination (PID response) which coincided with the groundwater interface
		31OBMW1-0418	8.61	Groundwater	Assess impacts from gas pits as well as other NED Sites within the general aviation pad	w	w		w	w	w	w	w	w		w								Tidally influenced monitoring well
		31OBMW1-1120	12	Groundwater	Assess seasonal variation of groundwater concentrations	w	w		w	w	w	w	w											
28, 30, 32, 33, 43 & 44 General Aviation Pad	APSB1	APSB1-1	0.75-2.75/1.75	Discrete	Generally assess impacts to soil and groundwater beneath the concrete aviation pad	s	s			s	s	s	s	s		s								Sample collected from 2-foot interval below concrete pad
	APSB2-1	3.4-5.4/4.4	Discrete			s	s			s	s	s	s	s		s								Sample collected from area of greatest contamination (PID response and petroleum odor)
	APSB2/ APOBMW2	APOBMW2-0418 (FD: APOBMW20-0418)	8.9	Groundwater	Assess groundwater impacts from evidence of soil contamination in the vicinity	w	w			w	w	w	w	w		w								APOBMW2 was installed in lieu of 42OBMW1, sheen on development water and petroleum odor during sampling.
		APOBMW2-1120 (FD: APOBMW20-1120)	12	Groundwater	Assess seasonal variation of groundwater concentrations	w	w			w	w	w	w	w										

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28, 30, 32, 33, 43 & 44 General Aviation Pad (cont.)	APSB3	APSB3-1	0.6-2.6/1.6	Discrete	Generally assess impacts to soil and groundwater beneath the concrete aviation pad	s	s			s	s	s	s	s		s							Sample collected from 2-foot interval below concrete pad, one (1) additional confirmatory soil boring was advanced to confirm refusal depth (APSB3A).	
	APSB4	APSB4-1	0.5-2.5/1.75	Discrete		s	s			s	s	s	s	s		s							Sample collected from 2-foot interval below concrete pad	
	APSB5	APSB5-1	2.5-4.5/3.5	Discrete		s	s			s	s	s	s	s		s								Sample collected from area of greatest contamination (coal and clinker layer). One (1) additional confirmatory soil boring was advanced to confirm refusal depth (APSB5A).
		APSB5B	Not collected	NA	Vertical and horizontal delineation of layer of coal																			Soil borings were advanced for coal observational delineation purposes only and no samples were planned for these locations
		APSB5C	Not collected	NA																				
		APSB5D	Not collected	NA																				
		APSB5E	Not collected	NA																				
	APSB5F	Not collected	NA																					
	APSB6	APSB6-1	0.66-2.66/1.66	Discrete	Generally assess soil beneath the concrete aviation pad	s	s			s	s	s	s	s		s								Sample collected from 2-foot interval below concrete pad. One (1) additional confirmatory soil boring was advanced to confirm refusal depth (APSB6-A).
	APSB7	APSB7-1	0.7-2.7/1.7	Discrete		s	s			s	s	s	s	s		s								Sample collected from 2-foot interval below concrete pad
	APSB8	APSB8-1	0.5-2.5/1.5	Discrete		s	s			s	s	s	s	s		s								
	APSB9	APSB9-1	0.83-2.83/1.83	Discrete		s	s			s	s	s	s	s		s								
	APSB10	APSB10-1	0.75-2.75/1.75	Discrete		s	s			s	s	s	s	s		s								
	APSB11	APSB11-1	1-3/2	Discrete		s	s			s	s	s	s	s		s								
	APSB12	APSB12-1	0.41-2.41/1.41	Discrete		s	s			s	s	s	s	s		s								
	30SB1/ 30OBMW1	30SB1-1	7-9/8	Discrete	To assess subsurface conditions downgradient of pad	s	s			s	s	s	s	s		s								No evidence of contamination was observed; therefore, sample was collected at the groundwater interface
		30OBMW1-0418	9.17	Groundwater	To assess groundwater downgradient of pad	w	w		w	w	w	w	w	w		w								Tidally influenced monitoring well
		30OBMW1-1120	14	Groundwater	Assess seasonal variation of groundwater concentrations	w	w		w	w	w	w	w											
	32SB1	32SB1-1	11-13/12	Discrete	To assess subsurface conditions downgradient of pad	s	s			s	s	s	s	s		s								No evidence of contamination was observed; therefore, sample was collected from the 2-foot interval above the refusal depth. This sample methodology deviated from the Field Sampling Plan, which, without evidence of contamination, called for the sample to be collected from the groundwater interface. Groundwater was encountered at 5 feet bgs.

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35 Boiler House #29	Stack debris	35W-1	NA	Ash/debris	Assess contents of stack and fire boxes to characterize source			s		s	s						s						Grab sample collected from contents of stack
	Fire box	35W-2	NA					s		s	s						s						Grab sample collected from contents of northern fire box
		35W-3	Not collected					s		s	s						s						Due to collapsed building, sample locations were inaccessible; therefore, samples were not collected
		35W-4	Not collected					s		s	s						s						
	35DU1	35DU1-1	0-1	ISM	To generally assess surface disposal of coal ash surrounding the boiler house			s		s	s						s						ISM 35DU1 comprised 30 aliquots per replicate Some building debris observed
		35DU1-2	0-1	ISM				s		s	s						s						
		35DU1-3	0-1	ISM				s		s	s						s						
	35DU2	35DU2-1 (FD: 35DU2-10)	0-1	ISM				s		s	s						s						ISM 35DU2 comprised 30 aliquots per replicate
		35DU2-2	0-1	ISM				s		s	s						s						
		35DU2-3	0-1	ISM				s		s	s						s						
	35DU3	35DU3-1	0-1	ISM				s		s	s						s						ISM 35DU3 comprised 30 aliquots per replicate
		35DU3-2	0-1	ISM				s		s	s						s						
		35DU3-3	0-1	ISM				s		s	s						s						
	35DU4	35DU4-1	0-1	ISM				s		s	s						s						ISM 35DU4 comprised 30 aliquots per replicate
		35DU4-2	0-1	ISM				s		s	s						s						
		35DU4-3	0-1	ISM				s		s	s						s						
	35DU5	35DU5-1	0-0.66	ISM	To delineate COIs in surface soil north of the boiler house				s	s	s			s			s						35DU5 comprised 30 0-0.66 foot aliquots per replicate
		35DU5-2 (MS/MSD)	0-0.66	ISM					s	s	s			s			s						
		35DU5-3	0-0.66	ISM					s	s	s			s			s						
	35DU6	35DU6-1 (MS/MSD)	0-1	ISM	To delineate COIs in surface soil east of the boiler house				s	s	s			s			s						35DU6 comprised 30 0-1 foot aliquots per replicate
		35DU6-2	0-1	ISM					s	s	s			s			s						
		35DU6-3	0-1	ISM					s	s	s			s			s						
	35DU7	35DU7-1	0-0.66	ISM	To delineate COIs in surface soil south of the boiler house				s	s	s			s			s						35DU7 comprised 30 0-0.66 foot aliquots per replicate
		35DU7-2	0-0.66	ISM					s	s	s			s			s						
		35DU7-3	0-0.66	ISM					s	s	s			s			s						
	35SB1	35SB1-1	0.5-2.5	Discrete	To vertically assess coal ash disposal around and downslope of the boiler house			s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval below the topsoil
		35SB1-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB2	35SB2-1	0.5-2.5	Discrete				s		s	s						s						Sample collected from entire thickness of observed coal
		35SB2-2 (2018)	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
		35SB2-2 (2020)	2.5-4.5	Discrete	Vertical delineation of previously detected COIs				s	s	s			s			s						Offset 2 feet north due to steam tunnel. Sampled collected from 2.5-4.5 feet bgs. Groundwater at 13 feet bgs.

Table 1
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Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
35 Boiler House #29 (cont.)	35SB3	35SB3-1 (FD: 35SB3-10)	0.5-2.5	Discrete	To vertically assess coal ash disposal around and downslope of the boiler house			s		s	s						s						Sample collected from entire thickness of observed coal
		35SB3-2 (2018)	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
		35SB3-2 (2020)	2.5-4.5	Discrete					s	s	s			s			s						<i>Some clinker between 0-11". Strange shine and olfactory evidence of petroleum between 12-13 feet bgs with associated PID reading of 6.06 ppm Sample collected from 2.5-4.5 feet bgs.</i>
	35SB4	35SB4-1	0.5-2.5	Discrete	To vertically assess coal ash disposal around and downslope of the boiler house			s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval below the topsoil
		35SB4-2 (2018)	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
		35SB4-2 (2020)	2.5-4.5	Discrete					s	s	s			s			s						<i>Sample collected from 2.5-4.5 feet bgs.</i>
	35SB5	35SB5-1	0.5-2.5	Discrete	To vertically assess coal ash disposal around and downslope of the boiler house			s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval below the topsoil
		35SB5-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB6	35SB6-1	0.5-2.5	Discrete				s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval below the topsoil
		35SB6-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB7	35SB7-1	0.5-2.5	Discrete				s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval below the topsoil
		35SB7-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB8	35SB8-1	0.5-2.5	Discrete				s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval below the topsoil
		35SB8-2 (2018)	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
		35SB8-2 (2020)	2.5-4.5	Discrete					s	s	s			s			s						<i>Sample collected from 2.5-4.5 feet bgs. Groundwater at 14 feet bgs.</i>
	35SB9	35SB9-1	0-2	Discrete	To vertically assess coal ash disposal around and downslope of the boiler house			s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval at the surface (no topsoil observed)
		35SB9-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB10	35SB10-1	0-2	Discrete				s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval at the surface (no topsoil observed)
		35SB10-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB11	35SB11-1	0-2	Discrete				s		s	s						s						No evidence of contamination observed; therefore, sample was collected from 2-foot interval at the surface (no topsoil observed)
		35SB11-2	Not collected	NA				s		s	s						s						Thickness of observed coal was less than 4 feet; therefore, no sample was collected
	35SB12	35SB12-1	1-3	Discrete	Boring to observe the vertical extent of coal ash, coal and clinker				s	s	s			s			s						No evidence of coal ash, coal, or clinker. Sample collected from 1-3 feet bgs.
		35SB12-2	3-5	Discrete					s	s	s			s			s						No observable contamination; therefore, the sample was collected from 3-5 feet bgs.
	35SB13	35SB13-1 (FD: 35SB13-10)	1-3	Discrete					s	s	s			s			s						No evidence of coal ash, coal, or clinker. Sample collected from 1-3 feet bgs.
		35SB13-2	3-5	Discrete					s	s	s			s			s						No observable contamination; therefore, the sample was collected from 3-5 feet bgs.

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35 Boiler House #29 (cont.)	35SB14	35SB14-1	1-3	Discrete	Boring to observe the vertical extent of coal ash, coal and clinker				s	s	s			s			s						Clinker observed between 4-10". Sample fulfills 1-3 foot increment and below observable contamination increment.
		35SB14-2	3-5	Discrete					s	s	s			s			s						No further observable contamination; therefore, the sample was collected from 3-5 feet bgs. Groundwater at approximately 8 feet bgs.
	35SB15	35SB15-1	1-3	Discrete					s	s	s			s			s						Clinker observed between 0-10". Sampled collected from 1-3 feet bgs.
		35SB15-2	3-5	Discrete					s	s	s			s			s						Red/black brick-like fill observed between 10.66-11.66 feet bgs. Sample was collected from 3-5 feet bgs.
	35SB16	35SB16-1 (MS/MSD)	1-3	Discrete					s	s	s			s			s						No evidence of coal ash, coal, or clinker. Sampled collected from 1-3 feet bgs.
		35SB16-2	3-5	Discrete					s	s	s			s			s						No observable contamination; therefore, the sample was collected from 3-5 feet bgs.
	35SB17	35SB17-1	1-3	Discrete					s	s	s			s			s						No evidence of coal ash, coal, or clinker. Sampled collected from 1-3 feet bgs.
		35SB17-2	3-5	Discrete					s	s	s			s			s						No observable contamination; therefore, the sample was collected from 3-5 feet bgs.
	35SB18	35SB18-1 (FD: 35SB18-10)	1-3	Discrete					s	s	s			s			s						No evidence of coal ash, coal, or clinker. Sampled collected from 1-3 feet bgs. Additional boring was advanced 0-5 feet bgs for sample volume.
		35SB18-2	3-5	Discrete					s	s	s			s			s						No observable contamination; therefore, the sample was collected from 3-5 feet bgs.
	35SB19	35SB19-1 (FD: 35SB19-10)	1-3	Discrete					s	s	s			s			s						Transite observed between 3-5" bgs. Sample collected from 1-3 feet bgs.
		35SB19-2	3-5	Discrete					s	s	s			s			s						No observable contamination; therefore, the sample was collected from 3-5 feet bgs. Groundwater at 11.5 feet bgs.
36 Degaussing Building	36SB1	NA	Not Collected	NA	To assess for presence of overburden groundwater																		Groundwater was not observed.
	36UST	36UST-SW	UST Sidewalls	Discrete	UST Removal Confirmatory Samples							s	s										No evidence of contamination observed, sample collected as composite of sidewalls
		36UST-B (FD: 36UST-BD)	UST Base	Discrete								s	s										No evidence of contamination observed, sample collected from base of excavation
	36SB2	36SB2-1	2-4/3	Discrete	To assess potential release beneath degaussing building machine shop area	s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		Depth of fill in building foundation extended to 2 feet bgs; therefore, the sample was collected from 2-4/3 feet bgs.
	36SB3	36SB3-1		Discrete		s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		Depth of fill in building foundation extended to 2 feet bgs; therefore, the sample was collected from 2-4/3 feet bgs.
37 Misc. Storage Bldg	37SB-1/ 37OBMW1	37SB1-1	5-7/6	Discrete	Assess possible release from tank of unknown use	s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, sample was collected from the groundwater interface. One (1) additional confirmatory soil boring was advanced to confirm refusal depth (37SB1A).
		37OBMW1-0418	10.64-10.74	Groundwater		w	w		w	w	w	w	w	w									Due to drawdown of water in monitoring well and slow recharge, the sample could only be collected for VOCs and VPH analysis. Depth of pump intake was lowered as water level dropped; therefore, there is a range for the pump intake depth.
		37OBMW1-mmyy	NA	Groundwater																			Well dry, not sampled in November 2020
37 Misc. Storage Bldg (cont.)	37SB2	37SB2-1	11-13/12	Discrete		s	s			s	s	s	s	s									No evidence of contamination was observed; therefore, sample was collected from the 2-foot interval above the refusal depth. This sample was not collected from the groundwater interface because the sample nearby 37SB1-1 was collected from the groundwater interface and in order to assess deeper soil, the depth above refusal was sampled. One (1) additional confirmatory soil boring was advanced to confirm refusal depth (37SB2A).

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38 Torpedo Storage #10	38DU1	38DU1-1	0-0.66	ISM	To assess the migration/tracking of PCBs from the transformer room							s		s									38DU1 comprised 30 0-1 foot aliquots per replicate Aliquots collected from soil on top of concrete, where present
		38DU1-2	0-0.66	ISM								s		s									
		38DU1-3	0-0.66	ISM								s		s									
	38DU2	38DU2-1	0-0.66	ISM								s		s									38DU2 comprised 30 0-1 foot aliquots per replicate Trace coal observed
		38DU2-2	0-0.66	ISM								s		s									
		38DU2-3	0-0.66	ISM								s		s									
	38DU3	38DU3-1	0-0.66	ISM	To assess the vicinity of the railroad loading rack	s			s	s	s			s		s							38DU3 comprised 30 0-1 foot aliquots per replicate Trace coal observed. Due COC error, metals and hexavalent chromium were not initially analyzed. Due to long hold time and extra sample volume, metals were added for analysis. Hexavalent chromium was resampled on August 26, 2020, results are pending and will be added to Table 3 when validated and approved results are available.
		38DU3-2	0-0.66	ISM		s			s	s	s			s		s							
		38DU3-3	0-0.66	ISM		s			s	s	s			s		s							
	38DU4	38DU4-SU1	0-1	ISM	To further delineate COPC identified in 38 DU3 and further encompass the Degaussing Building NED 36	s			s	s	s			s							1-gallon resealable bag Premeasured 1-liter 150 mL methanol		
		38DU4-SU2 (MS/MSD)	0-1	ISM		s			s	s	s			s							1-gallon resealable bag Premeasured 1-liter 150 mL methanol		
		38DU4-SU3	0-1	ISM		s			s	s	s			s							1-gallon resealable bag Premeasured 1-liter 150 mL methanol		
		38DU4-SU4	0-1	ISM		s			s	s	s			s							1-gallon resealable bag Premeasured 1-liter 150 mL methanol		
	Bldg 38	38LP-1	NA	Paint	To confirm lead paint results identified by XRF					s													Sampled from paint identified as lead paint with an XRF
		38LP-2	NA	Paint						s													
	Vicinity of spilled transformer	38SS-1 (38SS-10 not comparable, see notes)	0-0.5	Discrete SS	Assessment of extent of spilled transformer contents							s	s	s**									Sample collected from soil outside of eastern door to transformer house. Duplicate sample is not applicable due to different analyses requested as a result of miscommunication relative to samples 38SS-10 and 38SS-010- analyses changes.
		38CC-1	0-0.04	Concrete										s**									Sample collected from corners of concrete transformer pad
		38SS-2	0-0.5	Discrete SS								s	s	s**									Sample collected from floor debris/soil to the south of concrete transformer pad
		38CC-2	0-0.04	Concrete										s**									Sample collected from corners of concrete transformer pad
		38SS-3	0-0.5	Discrete SS								s	s	s**									Sample collected from floor debris/soil to the south of concrete transformer pad

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38 Torpedo Storage #10 (cont.)	Vicinity of spilled transformer	38CC-3	0-0.04	Concrete	Assessment of extent of spilled transformer contents									s**									Sample collected from concrete floor adjacent to concrete transformer pad
		38SS-4	0-0.5	Discrete SS								s	s	s**									Sample collected from floor debris/soil on floor of transformer house to the east of the concrete pad
		38CC-4	0-0.04	Concrete										s**									Sample collocated next to 38SS-6 inside transformer pen
		38SS-5	0-0.5	Discrete SS								s	s	s**									Sample collected from floor debris/soil on floor of transformer house to the north of the concrete pad
		38CC-5	0-0.04	Concrete										s**									Sample collocated next to 38SS-7 south of transformer pen
		38SS-6	0-0.5	Discrete SS								s	s	s**									Sample collected of floor debris/soil collocated next to 38CC-4 inside transformer pen
		38CC-6	0-0.04	Concrete										s**									Sample collocated next to 38SS-8 east of transformer pen
		38SS-7	0-0.5	Discrete SS								s	s	s**									Sample collected of floor debris/soil collocated next to 38CC-5 south of transformer pen
		38CC-7	Not collected	NA										s**									Sample was not collected due there being sufficient concrete samples surrounding transformer areas at NED Site 38
		38SS-8	0-0.5	Discrete SS								s	s	s**									Sample collected of floor debris/soil collocated next to 38CC-6 east of transformer pen
		38CC-8	Not collected	NA										s**									Sample was not collected due there being sufficient concrete samples surrounding transformer areas at NED Site 38
		38CC-9	Not collected	NA										s**									Sample was not collected due there being sufficient concrete samples surrounding transformer areas at NED Site 38
	Interior and exterior of Building #10	38SS-9	0-0.5	Discrete SS	Assessment of impacts to surface soil or floor debris within and outside torpedo storage building					s	s				s								Sample collected from soil outside southern bay door
		38SS-010	0-0.5	Discrete SS						s	s				s								Sample collected from soil outside southern bay door, sample mistakenly analyzed for incorrect analyses due to miscommunication relative to 38SS-010 and 38SS-10 analyses changes.
		38SS-11	0-0.5	Discrete SS						s	s				s								Sample collected from soil outside of western door to transformer house
		38SS-12	0-0.5	Discrete SS						s	s				s								Sample collected from soil to the east of building
		38SS-13	0-0.5	Discrete SS						s	s				s								Samples collected from floor debris inside the building
		38SS-14	0-0.5	Discrete SS						s	s				s								
	38SB1	38SB1-1	1-2/1.5	Discrete	Vertically delineate COPCs beneath 38DU4	s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	38SB2	38SB2-1	1-2/1.5	Discrete		s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	38SB3	38SB3-1	1-2/1.5	Discrete		s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	38SB4	38SB4-1 (FD: 38SB4-10)	1-2/1.5	Discrete		s			s	s	s			s							2 - 40 mL VOA (methanol) 2 - 4 oz amber		
	38SB5	38SB5-1	1-2/1.5	Discrete		s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	38SB6	38SB6-1	1-2/1.5	Discrete		s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	38SB7	38SB7-1	1-2/1.5	Discrete		s			s	s	s			s							1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	38SB8	38SB8-1 (FD: 38SB8-10)	1-2/1.5	Discrete		s			s	s	s			s							2 - 40 mL VOA (methanol) 2 - 4 oz amber		
39 Well House #81	Transformer pad	39CC-1	0-0.04	Concrete	Assess impacts from former transformer									s**									Sample collected from 0.5 inch of concrete transformer pad.
	Soil surrounding pad	39SS-2	0-0.5	Discrete SS								s	s	s**									Sample collected from top 6 inches on each side of the transformer pad
		39SS-3	0-0.5	Discrete SS								s	s	s**									
		39SS-4	0-0.5	Discrete SS								s	s	s**									
		39SS-5	0-0.5	Discrete SS								s	s	s**									

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42 5,000-gallon Tank (av Gas) Ordnance test Facility Gasoline Outlet #30	42SB1	42SB1-1	0.5-2.5/1.5	Discrete	Assess the location of former tank	s	s			s	s	s	s	s									No evidence of contamination or groundwater observed; therefore, sample was collected from 2-foot interval above refusal depth. One (1) additional confirmatory soil boring was advanced to confirm refusal depth (42SB1-A).
		42SB1-2	Not collected	NA		s	s			s	s	s	s	s									Sample was not collected due to shallow depth of soil boring (refusal at 2.5 feet bgs)
	42SB2/ 42OBMW1	42SB2-1	0-2/1	Discrete		s	s			s	s	s	s	s									No evidence of contamination or groundwater observed; therefore, sample was collected from 2-foot interval above refusal depth. One (1) additional confirmatory soil boring was advanced to confirm refusal depth (42SB2-A).
		42SB2-2	Not collected	NA		s	s			s	s	s	s	s									Sample was not collected due to shallow depth of soil boring (refusal at 2.5 feet bgs)
		42OBMW1-mmyy	Not collected	NA		w	w		w	w	w	w	w	w									No groundwater observed; therefore, monitoring well was not installed
	42SB3	42SB3-1	0-2/1	Discrete		s	s			s	s	s	s	s									-1 samples were collected from 0-2 feet. No evidence of contamination or groundwater was observed; therefore, -2 samples from each boring were sampled from the 2 foot interval above refusal. One (1) additional confirmatory soil boring was advanced for each of these three soil boring location to confirm refusal depth (42SB3-A, 42SB4-A, and 42SB5-A).
		42SB3-2	3.83-5.83/5	Discrete		s	s			s	s	s	s	s									
	42SB4	42SB4-1	0-2/1	Discrete		s	s			s	s	s	s	s									
		42SB4-2	5-7/6	Discrete		s	s			s	s	s	s	s									
	42SB5	42SB5-1	0-2/1	Discrete		s	s			s	s	s	s	s									
		42SB5-2	6-8/7	Discrete		s	s			s	s	s	s	s									
9 & 48 Debris Stockpile and Magazine Ignitor Storage	48DU1	48DU1-1	Not collected	NA	Assess possible landfill or stockpiling		s			s	s	s		s		s							ISM sampling was abandoned in favor three discrete surface soil samples due to the lack of evidence of coal contamination was observed during the advancement of soil borings in the area prior to the start of ISM sampling
		48DU1-2	Not collected	NA			s			s	s	s		s		s							
		48DU1-3	Not collected	NA			s			s	s	s		s		s							
		48SS-1	0-0.5	Discrete SS			s			s	s	s		s		s							
		48SS-2	0-0.5	Discrete SS			s			s	s	s		s		s							
		48SS-3	0-0.5	Discrete SS			s			s	s	s		s		s							
	48SB1	48SB1-1	27-29/28	Discrete		s	s			s	s	s	s	s		s							No evidence of contamination or groundwater observed; therefore, samples were collected from 2-foot interval above refusal depth
	48SB2	48SB2-1	22-24/23	Discrete	Assess possible landfill or stockpiling	s	s			s	s	s	s	s		s							
49 Water Tower Pump House	49DU1	49DU1-SU1	0-1	ISM	To assess the extent of COI				s	s	s			s									49DU1 comprised three SUs, each consisting of 30 0-1 foot aliquots
		49DU1-SU2 (MS/MSD)	0-1	ISM					s	s	s			s									
		49DU1-SU3	0-1	ISM					s	s	s			s									
	49SB1	49SB1-1 (FD: 49SB1-10)	0.5-2.5/1.5	Discrete	To assess the vertical extent of previously documented PCB	s								s									No evidence of contamination: therefore, the sample was collected from 0.5-2.5/1.5 feet bgs.
	49SB2	49SB2-1 (FD: 49SB2-10)	0.5-2.5/1.5	Discrete		s								s									Beige debris (suspect coal ash) and coal from approximately 0.4-1.5 foot bgs; therefore, the sample was collected from 0.5-2.5/1.5 feet bgs.
	49SB3	49SB3-1	1-3/2	Discrete	To assess the vertical extent below DU	s			s	s	s			s									Sample collected from 1-3/2 feet bgs.
	49SB4	49SB4-1 (MS/MSD)	0.5-2.5/1.5	Discrete		s			s	s	s			s									Trace coal observed from approximately 0.24-0.7 feet bgs. Sample collected from 0.5-2.5/1.5 feet bgs.
	49SB5	49SB5-1	1-3/2	Discrete		s			s	s	s			s									Sample collected from 1-3/2 feet bgs.
	49SB6	49SB6-1	1-3/2	Discrete		s			s	s	s			s									Sample collected from 1-3/2 feet bgs.
	49SB7	49SB7-1	1-3/2	Discrete		s			s	s	s			s									Sample collected from 1-3/2 feet bgs.
	Abandoned boiler	49SS-1	0-0.5	Discrete SS	Assess possible releases from pump house boiler and AST	s	s			s	s	s	s	s									Sample collected from soil adjacent to abandoned boiler
	Abandoned AST	49SS-2	0-0.5	Discrete SS		s	s			s	s	s	s	s									Sample collected from soil adjacent to abandoned AST

Table 1
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Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes	
50 Switch Building	50DU1	50DU1-1	0-1	ISM	To assess migration of PCBs from interior oil release outside the building									s							1-gallon resealable bag			
		50DU1-2	0-1	ISM											s							1-gallon resealable bag		
		50DU1-3	0-1	ISM												s							1-gallon resealable bag	
	50ASB1	50ASB1-1	10-11	Discrete	To assess for release of PCBs from building's pit										s							1 - 4 oz glass		Borehole angle is 30 degrees, Bottom of Foundation 10 feet COS (30) = adjacent/hypotenuse =X*SQCRT(3)/2X 15-foot borings are 13 feet bgs (i.e., 2 feet below 10 foot foundation)
	50ASB2	50ASB2-1		Discrete										s							1 - 4 oz glass			
	50ASB3	50ASB3-1		Discrete										s							1 - 4 oz glass			
	50ASB4	50ASB4-1		Discrete										s								1 - 4 oz glass		
Sitewide	BRMW-1	BRMW-1-0418 (FD: BRMW-10-0418)	43.5	Groundwater	To assess the bedrock aquifer in the bay ward sides of the island to intercept any possible contamination migrating into the bay at depth	w	w		w	w	w	w	w	w		w								
		BRMW-1-1120 (FD: BRMW-10-1120)	46	Groundwater		w	w		w	w	w	w	w											
	BRMW-2	BRMW-2-0418	23.67	Groundwater		w	w		w	w	w	w	w	w		w								
		BRMW-2-1120	25	Groundwater		w	w		w	w	w	w	w											
	BRMW-3	BRMW-3-0418	37.17	Groundwater		w	w		w	w	w	w	w	w		w								
		BRMW-3-1120	40.5	Groundwater		w	w		w	w	w	w	w											
	BRMW-4	BRMW-4-0418	29.5	Groundwater	To assess the bedrock aquifer in the bay ward sides of the island to intercept any possible contamination migrating into the bay at depth	w	w		w	w	w	w	w	w		w								During well development and groundwater sampling, extremely high pH, ranging from 12.40 to 13.99, was observed.
		BRMW-4-1120	33	Groundwater		w	w		w	w	w	w												pH was again identified at 12.
		BRMW-4-0422 (MS/MSD)	33	Groundwater		w			w			w	w									8 - 40 mL VOA (HCl) 3 - 1L amber 3 - 1 L L amber (HCl)		
	BRMW-5	BRMW-5-0418	74.5	Groundwater		w	w		w	w	w	w	w	w		w								
BRMW-5-1120		77	Groundwater	w		w		w	w	w	w	w												

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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/AS310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservatives for Alpha - Blue (per sample)	Notes
Background	Eastern undisturbed areas of island	BG1	0-1	Discrete SS	To evaluate background concentrations of arsenic for comparison to other areas of the Site in the risk assessment					As													Could not advance hand auger deeper than 1 foot bgs; therefore, samples were collected from 0 to 1 foot bgs
		BG2	0-1	Discrete SS						As													
		BG3	0-1	Discrete SS						As													
		BG4	0-1	Discrete SS						As													
		BG5	0-1	Discrete SS						As													
		BG6	0-1	Discrete SS						As													
		BG7	0-1	Discrete SS						As													
		BG8	0-1	Discrete SS						As													
		BG9	0-1	Discrete SS						As													
		BG10	0-1	Discrete SS						As													
	Western undisturbed areas of island	BG11 (FD: BG110)	0-1	Discrete SS	To evaluate discrete background concentrations for comparison to other discrete samples in the risk assessment				s	s	s						s			s			Moved approximately 10 feet south due to access Sample collected from 0-1 foot bgs
		BG12 (MS/MSD)	0-1	Discrete SS					s	s	s						s			s			Moved approximately 10 feet west due to access Sample collected from 0-1 foot bgs
		BG13	0-1	Discrete SS					s	s	s						s			s			Samples collected from 0-1 foot bgs
		BG14	0-1	Discrete SS					s	s	s						s			s			
		BG15	0-1	Discrete SS					s	s	s						s			s			
		BG16	0-1	Discrete SS					s	s	s						s			s			
		BG17	0-1	Discrete SS					s	s	s						s			s			
	Eastern undisturbed areas of island	BG18	0-1	Discrete SS					s	s	s						s			s			Moved approximately 30 feet southeast away from asphalt/tar-like material and drums Sample collected from 0-1 foot bgs. BGSU1 and BGSU2 each comprised 30 0-0.83 foot aliquots per sampling unit BGSU3 and BGSU4 each comprised 30 0-1 foot aliquots per sampling unit BGSU5 and BGSU6 each comprised 30 0-0.66 foot aliquots per sampling unit
		BG19	0-1	Discrete SS					s	s	s						s			s			
		BG20	0-1	Discrete SS					s	s	s						s			s			
		BG21	0-1	Discrete SS					s	s	s						s			s			
		BG22	0-1	Discrete SS					s	s	s						s			s			
		BGSU1	0-0.83	ISM	To evaluate ISM background concentrations for comparison to other ISM samples in the risk assessment				s	s	s						s						
		BGSU2	0-0.83	ISM					s	s	s						s						
		BGSU3	0-1	ISM					s	s	s						s						
		BGSU4	0-1	ISM					s	s	s						s						
		BGSU5	0-0.66	ISM					s	s	s						s						
		BGSU6	0-0.66	ISM					s	s	s						s						
	Eastern subtidal sediments	BGSD-1	0-0.5	Sediment	To assess local background sediment concentrations on the eastern side of the island.				s	s	s						s			s			
		BGSD-2	0-0.5	Sediment					s	s	s						s			s			
		BGSD-3	0-0.5	Sediment					s	s	s						s			s			
		BGSD-4	0-0.5	Sediment					s	s	s						s			s			
		BGSD-5	0-0.5	Sediment					s	s	s						s			s			
		BGSD-6	0-0.5	Sediment					s	s	s						s			s			
		BGSD-7	0-0.5	Sediment					s	s	s						s			s			
		BGSD-8	0-0.5	Sediment					s	s	s						s			s			
		BGSD-9	0-0.5	Sediment					s	s	s						s			s			
		BGSD-10	0-0.5	Sediment					s	s	s						s			s			
		BGSD-11	0-0.5	Sediment					s	s	s						s			s			
		BGSD-12	0-0.5	Sediment					s	s	s						s			s			

Table 1
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Gould Island Site
Narragansett Bay, Jamestown, Rhode Island

NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservativ es for Alpha - Blue (per sample)	Notes
Outfalls	OF-1	OF-1	0-1/0.5	Discrete SS	To assess outfalls as potential point sources	s			s	s	s												Sample collected from 0-1 foot bgs. 12-inch outfalls extending west from the NED Site 36 Degaussing Building.
	OF-2	OF-2	0-1/0.5	Discrete SS		s			s	s	s												Some debris (glass, brick) observed. Sample collected from 0-1 foot bgs. 5-inch outfalls extending west from the NED Site 38 Torpedo Building.
	OF-3	OF-3	0-1/0.5	Discrete SS		s			s	s	s												Sample collected from 0-1 foot bgs. 12-inch outfall west of the NED Site 38 Torpedo Building is of untraceable origin.
	OF-4	OF-4	0-1/0.5	Discrete SS		s			s	s	s												Sample collected from 0-1 foot bgs. 5-inch outfall extending west immediately west of NED Site 4 Pump House.
	OF-5	OF-5	0-1/0.5	Discrete SS		s			s	s	s												Sample collected from 0-1 foot bgs. 8-inch outfall extending west from NED Site 8 Incinerator Building
	OF-6	OF-6	0-1/0.5	Discrete SS		s			s	s	s												Sea glass observed. Sample collected from 0-1 foot bgs. 5-inch outfall located on the northeastern side of the island is untraceable inland but is located north of NED Site 20 Former Cable Terminal Building.
	OF-7	OF-7	0-1/0.5	Discrete SS		s			s	s	s												Sample collected from 0-1 foot bgs. 8-inch clay pipe west of the NED Site 35 Boiler House. This outfall could not be traced inland and is no longer connected to its source
Outfalls (cont.)	OF-8	OF-8	0-1/0.5	Discrete SS	Assess outfalls as potential point sources	s			s	s	s												Sample collected from 0-1 foot bgs. 8-inch outfall located to the northeast of the NED Site 12 Maintenance Building is likely associated with the 1900-gallon septic system on the 1956 Advance Planning Sewage Disposal System (APSDS) plan
	OF-9	OF-9	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	OF-10	OF-10	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		
	OF-11	OF-11	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		Submerged at the time of sampling during low tide.
	OF-12	OF-12	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		Submerged at the time of sampling during low tide.
	OF-13	OF-13	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		Submerged at the time of sampling during low tide.
	OF-14	OF-14	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		Submerged at the time of sampling during low tide.
	OF-15	OF-15	0-1	Discrete SS		s			s	s	s										1 - 40 mL VOA (methanol) 1 - 4 oz amber		

Table 1
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NED Site	Sample Location	Sample ID (Field Duplicate ID)	Sample Depth or Target Depth (feet bgs)	Sample Type	Justification	VOCs EPA Method 8260C	SVOCs EPA Method 8270D	PAHs by EPA Method 8270D	PAHs by EPA Method 8270D by SIM	PP Metals EPA Method 6020A & 7471B/7470A ²	Hexavalent Chromium EPA Method 7196A	EPH by MADEP EPH-04-1.1	VPH by MADEP VPH-04-1.1	PCBs by EPA Method 8082A	Pesticides by EPA Method 8081B	Explosives EPA method 8330B ¹	Dioxin/furan EPA Method 8290	pH EPA Method 9045C	Cyanide Method 9014	Total Organic Carbon Lloyd Kahn/A5310B	Sample Volume and Containers/Preservatives for ARA - Green (per sample)	Sample Volume and Containers/Preservativ es for Alpha - Blue (per sample)	Notes
Sitewide	IDW Drums	WC-D1	NA	Wastewater	To characterize IDW (containerized purge water from monitoring wells with evidence of contamination)																		Samples collected for waste characterization purposes only and were not part of the QAPP, included in the SEDD, nor validated since the DQO for this data was met after acceptance by the disposal facility.
		WC-D2	NA	Wastewater																			
		WC-D3	NA	Wastewater																			

Notes
1 - Explosives analysis includes nitroglycerin
2 - Metals groundwater samples were field filtered for dissolved analysis
3 - Samples listed with a grayed out sample ID were not collected during the Remedial Investigation due to the reason listed in the notes.
Regular font indicates samples were planned for and collected during the Spring 2018 and 2020 sampling events. In some instances sample IDs that were not collected in 2018/2020, were reused in 2022.
In the case of duplicate IDs on the table, the year is indicated in parenthesis.

Red text indicates new samples collected during 2022 sampling event.
Gray text - sample not collected
~~Strikethrough~~ - indicates previously sampled media removed during building demolition/debris removal activities
As - only arsenic was analyzed for background samples
bgs - below ground surface
FD - field duplicate
NC - not collected
s+ - Fingerprinting was performed on two samples containing evidence of petroleum
s**- Soxhlet extraction required
Blue shaded cell - Groundwater sample
Red shaded cell - Concrete sample
Green shaded cell - Sediment sample
Unshaded - Soil sample
BaP - benzo(a)pyrene BaA - Benzo(a)anthracene
Cr+6 - hexavalent chromium Hg - mercury

Table 2
Monitoring Well Construction Details and Groundwater Elevations
Gould Island
Narragansett Bay, Jamestown, Rhode Island

Monitoring Well ID	Gauging Date	Approximate Screened Interval (feet bgs) ¹	Ground Surface Elevation (feet AMSL)	Top of Riser (TOR) Elevation (feet AMSL)	Top of Casing Elevation (feet AMSL)	Depth to Bottom (feet below TOR)	Depth to Water - High Tide ^{2,5} (feet below TOR)	Depth to Water - Low Tide ³ (feet below TOR)	High Tide ² Water Level Elevation (feet AMSL)	Northing (STP feet)	Easting (STP feet)
10OBMW-2	4/17/2018	15-25	22.03	25.08	25.36	27.70	17.57	17.89	7.51	163945.276	370337.810
	11/17/2020					26.47	21.96	-	3.12		
11OBMW1	4/26/2022	5-15	34.04	36.77	36.89	17.34	10.95	-	25.82	164515.51	370903.81
11OBMW2	4/26/2022	5-15	39.79	42.49	42.64	17.17	11.95	-	30.54	164563.28	370806.94
12OBMW-1	4/17/2018	4-14	45.52	42.58	45.84	16.58	11.74	11.70	30.84	164255.768	370746.692
	11/17/2020					16.90	Dry	-	NA		
	4/26/2022					16.90	14.14	-	28.44		
12OBMW-2	4/17/2018	4-14	42.20	45.16	45.60	16.61	10.77	10.95	34.39	164328.828	370780.037
	11/17/2020					17.05	16.91	-	28.25		
	4/26/2022					16.90	13.06	-	32.10		
27OBMW-1	4/17/2018	3-13	6.42	9.57	9.72	15.80	7.87	8.24	1.70	162568.509	370708.527
	11/17/2020					15.75	7.82	-	1.75		
30OBMW 1	4/17/2018	5-15	4.59	7.95	8.12	17.04	6.25	0.00	1.70	162654.291	370435.672
	11/17/2020					17.02	6.23	-	1.72		
31OBMW-1	4/17/2018	5.5-15.5	5.57	8.76	8.96	18.05	6.65	8.40	2.11	162862.575	370431.302
	11/17/2020					18.35	6.14	-	2.62		
37OBMW-1	4/17/2018	3-11	16.53	19.60	19.80	13.70	12.73	13.00	6.87	163237.471	370618.051
	11/17/2020					13.70	Dry	-	NA		
APOBMW-2	4/17/2018	5-13	6.37	9.28	9.47	15.51	7.77	7.91	1.51	162732.887	370693.777
	11/17/2020					15.65	8.15	-	1.13		
BRMW-1	4/17/2018	22-56	26.90	29.06	29.34	58.16	17.48	17.60	11.58	164063.947	370366.738
	11/17/2020					59.20	24.69	-	4.37		
BRMW-2	4/17/2018	12-29	10.38	11.96	12.35	30.58	4.23	4.95	7.73	163227.190	371059.078
	11/17/2020					29.20	7.68	-	4.28		
BRMW-3	4/17/2018	31.5-50.5	14.80	18.01	18.27	53.71	13.74	14.20	4.27	163166.504	370532.637
	11/17/2020					50.50	16.34	-	1.67		
BRMW-4	4/17/2018	24-40	33.19	36.07	36.51	42.88	19.11	19.89	16.96	164338.625	370937.687
	11/17/2020					38.96	26.98	-	9.09		
	4/26/2022					38.96	18.88	-	17.19		
BRMW-5	4/17/2018	63-91	29.62	32.16	32.59	93.54	22.35	23.15	9.80	164402.97	370360.12
	11/17/2020					91.00	27.71	-	4.45		

AMSL - above mean sea level

STP - State Plane

1 - Screened interval data taken from boring logs recorded during soil boring/well installation activities

2 - 2018 High tide water level readings taken between 09:30 and 10:50, with tide retreating, high tide at 09:29, next low tide at 14:53

3 - 2018 Low tide water level readings taken between 16:30 and 17:30, with tide rising, low tide at 14:53, next high tide at 21:48

4 - Northing and easting coordinates displayed in Rhode Island State Plane, NAD 1983 coordinate system

5 - High and low tide synoptic round completed only during April 2018 sampling event. During November 2020 and April 2022 gauging events, conductivity and salinity data did not indicate tidal impact to groundwater systems and gauging was completed at the time of sampling and measurements are provided above in "high tide" columns.

APPENDIX A

REMEDIAL INVESTIGATION PHOTO LOG

Appendix A – Remedial Investigation Photo Log
Gould Island Site, D01RI033800
Narragansett Bay, Jamestown, Rhode Island



1. View of equipment being loaded onto A&R Marine vessel for transport to the island on March 30, 2022



2. View of clearing efforts on March 30, 2022

Appendix A – Remedial Investigation Photo Log
Gould Island Site, D01RI033800
Narragansett Bay, Jamestown, Rhode Island



3. View of drilling equipment delivered to the island on April 4, 2022



4. View of angled boring advancement at the Switch House (NED 50)

Appendix A – Remedial Investigation Photo Log
Gould Island Site, D01RI033800
Narragansett Bay, Jamestown, Rhode Island



5. View of boring advancement at Transformer Pen (NED 13)



6. View of boring advancement at former Quonset Huts (NED 11)

Appendix A – Remedial Investigation Photo Log
Gould Island Site, D01RI033800
Narragansett Bay, Jamestown, Rhode Island



7. View of boring advancement at Coal Storage North (NED 1)



8. View of boring advancement at Degaussing Building/Torpedo Building (NED 36/38)

Appendix A – Remedial Investigation Photo Log
Gould Island Site, D01RI033800
Narragansett Bay, Jamestown, Rhode Island



9. View of boring advancement at Fire Station (NED 12)



10. View of outfall sampling at submerged location (OF-14)

Appendix A – Remedial Investigation Photo Log
Gould Island Site, D01RI033800
Narragansett Bay, Jamestown, Rhode Island



11. View of outfall sampling at non-submerged location (OF-10)



12. View of ISM sample recovery at Disposal Area #14 (NED 10)

APPENDIX B

DIRECT PUSH SOIL BORING LOGS AND WELL CONSTRUCTION LOGS



Credere Associates, LLC
776 Main Street
Westbrook, Maine 04092
Phone: 207-828-1272
Fax: 207-887-1051

Boring Log

01SB14R
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/5/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** 15 **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 38.61
NOTES 60" length, 2" diameter poly core liner, Boring advanced 2 feet from original location to confirm prior petroleum results

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/33		0.246			0-4" Dark brown, very fine to fine SAND and SILT, little Organics, moist (SM)	No Well Install
			0.168			4-33" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.144				
			0.144				
			0.142				
5	60/49		0.134			0-2" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.132	01SB14R-1 (5-6/5.5)		2-15" Dark gray, very fine to medium SAND, some fine Gravel, moist (SW)	
			0.136	01SB14R-2 (6-8/7)		15-17" Gray, CRUSHED ROCK, dry (GW)	
			0.130			17-31" Dark brown, very fine to medium SAND, little Silt, little fine Gravel, moist (SW)	
			0.135			31-49" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
10	60/55		0.150			0-22" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.136				
			0.126			22-55" Dark gray mottled dark brown, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.145				
			0.136				
15	36/26		0.128			0-4" Dark gray mottled dark brown, very fine to medium SAND and SILT, some fine Gravel, wet (SM)	
			0.123			4-14" Dark brown, very fine to fine SAND and SILT, little Clay, trace fine Gravel, wet (SM)	
			0.126			14-26" Dark brown, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
						End of boring at 18 feet below ground surface (equipment refusal)	
20							
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/5/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 43.33
NOTES 60" length, 2" diameter poly core liner, step out east of 01SB14 where petroleum previously identified

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/40		0.136			0-5" Dark brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.128			5-24" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.125				
			0.124			24-37" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.147				
5	60/46		0.127	01SB16-1 (5-6/5.5)		37-40" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.127			0-16" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.129	01SB16-2 (6-8/7)		16-25" Dark brown, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.123	01SB16-20		25-31" Light gray, CRUSHED ROCK, dry (GW)	
			0.119			31-46" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
10	60/47		0.131			0-27" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.163				
			0.147				
			0.134			27-44" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.135				
15	60/44		0.134			44-47" Dark brown mottled gray, fine GRAVEL, some very fine to fine Sand, some Silt, moist (GW)	
			0.136			0-37" Dark brown mottled gray, fine GRAVEL, some very fine to fine Sand, some Silt, moist (GW)	
			0.134				
			0.137				
			0.134			37-44" Dark gray, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
20						End of boring at 20 feet below ground surface (equipment refusal)	
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/5/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 43.95
NOTES 60" length, 2" diameter poly core liner, step out south of 01SB14 where petroleum previously identified

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/38		0.176			0-4" Brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.155			4-20" Dark gray, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
			0.163				
			0.161			20-24" Dark brown, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
			0.171			24-30" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
5	60/55		0.182			30-38" Dark brown, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
			0.154	01SB17-1 (5-6/5.5)		0-20" Dark gray, Dark brown, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
			0.163	01SB17-2 (6-8/7)		20-32" Dark gray, very fine to medium SAND, little Silt, little fine Gravel, moist (SW)	
			0.158			32-50" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.167				
10	60/33		0.158			50-55" Dark gray, very fine to medium SAND, little Silt, little fine Gravel, moist (SW)	
			0.175			0-33" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.146				
			0.155				
			0.170				
15	60/49		0.184			0-27" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM), wet at 15" (SM)	
			0.147				
			0.154				
			0.151			27-49" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.142				
20	60/29		0.143			0-13" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, wet (SW)	
			0.132				
			0.136			13-20" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.129				
			0.123			20-29" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
25						End of boring at 25 feet below ground surface (refusal)	



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 34.69
NOTES 60" length, 2" diameter poly core liner, step out north of 01SB14 where petroleum previously identified

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/42		0.000			0-6" Dark brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.000			6-15" Dark brown, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.000			15-19" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.000			19-22" Brown, very fine to medium SAND, some fine Gravel, little Silt, moist (SW)	
			0.000			22-33" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
5	60/51		0.000	01SB18-1 (5-6/5.5)		33-42" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.000	01SB18-2 (6-8/7)		0-10" Dark gray mottled with brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.000			10-28" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.000			28-32" Dark gray, CRUSHED ROCK, dry (GW)	
			0.000			32-41" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
10	60/60		0.000			41-51" Dark gray mottled brown, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.000			0-16" Dark gray, very fine to fine SAND and SILT, little Clay, trace fine Gravel, wet (SM)	
			0.000			16-31" Dark gray, very fine to medium SAND and SILT, light fine Gravel, moist (SM)	
			0.000			31-34" Brown, very fine to fine SAND, little fine Gravel, trace Silt, moist (SP)	
			0.000			34-48" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
15						48-50" Light gray, CRUSHED ROCK, dry (GW)	
						50-60" Gray, WEATHERED BEDROCK, dry (BEDROCK)	
						End of boring at 15 feet below ground surface (refusal on bedrock)	
20							
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 42.29
NOTES 60" length, 2" diameter poly core liner, step out west of 01SB14 where petroleum previously identified

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/39		0.000			0-5" ROOT, little very fine to fine Sand and Silt, moist (SM)	No Well Install
			0.000			5-26" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.000				
			0.000				
			0.000			26-30" Brown, very fine to fine SAND and SILT, moist (SM)	
			0.000			30-39" Gray, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
5	60/56		0.000	01SB19-1 (5-6/5.5)		0-18" Brown, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.003				
			0.000	01SB19-2 (6-8/7)		18-56" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.000				
			0.000				
10	60/52		0.000			0-14" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.000			14-19" Brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.000			19-40" Dark olive gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.000			40-52" Gray, WEATHERED BEDROCK, dry (BEDROCK)	
15						End of boring at 15 feet below ground surface (refusal on bedrock)	
20							
25							

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11SB1/110BMW1

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CLIENT USACE CENAE

PROJECT NAME Gould Island

PROJECT # 16001327

PROJECT LOCATION Gould Island, Jamestown, Rhode Island

DATE STARTED 4/5/22 LOGGED BY Samantha Foote

DEPTH TO WATER 15 WELL DIAMETER 2"

CONTRACTOR New England Geotech/Maynor Mandoza

WELL MATERIALS PVC, 0.010" slotted screen, solid riser

DRILLING METHOD Direct Push

ANNULUS MATERIALS #00 Silica Sand, Granular Bentonite

DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25"

MP ELEVATION 36.77 GROUND ELEVATION 34.04

NOTES 60" length, 2" diameter poly core liner, no soil samples collected

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/43		0.036			0-11" Dark brown, very fine to fine SAND and SILT, little Organics, trace fine Gravel, moist (SM)	Well Finish: Stick up (34.25") Concrete Backfill (#00 Sand) Bentonite Seal Sandpack (#00 Sand) Screen (5-15' bgs) 2" 0.01" Slotted Schedule 40 PVC
			0.036			11-16" Olive gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.168			16-30" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.171			30-43" Dark gray, very fine to medium SAND, some fine Gravel, little Silt, moist (SW)	
			0.047			0-17" Dark gray, very fine to medium SAND, some fine Gravel, little Silt, moist (SW)	
5	60/44		0.040			17-27" Dark brown, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.042			27-29" Dark gray, CRUSHED ROCK, dry (GW)	
			0.050			29-44" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.031			0-26" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist (SM)	
			0.037			26-52" Dark gray mottled brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
10	60/52		0.067			0-20" Dark gray, very fine to medium SAND and SILT, some fine Gravel, wet (SM)	
			0.037			20-27" Dark gray mottled brown, very fine to fine SAND and SILT, little fine Gravel, wet (SM)	
			0.049			27-30" Gray, WEATHERED BEDROCK, dry (BEDROCK)	
			0.047			End of boring at 17.5 feet below ground surface (refusal on bedrock)	
			0.034				
15	30/30*		0.090				
			0.083				
			0.097				
20							
25							

*Soil in last core stuck in macrocore. Had to hammer out onto ground. Unable to get accurate recovery, assumed 30 inches.



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/5/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** 11 **WELL DIAMETER** 2"
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** PVC, 0.010" slotted screen, solid riser
DRILLING METHOD Direct Push **ANNULUS MATERIALS** #00 Silica Sand, Granular Bentonite
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** 42.49 **GROUND ELEVATION** 39.79
NOTES 60" length, 2" diameter poly core liner, no soil samples collected, ambient PID 0.115 ppm

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/37		0.123			0-12" Dark brown, very fine to fine SAND and SILT, some Organics, little fine Gravel, moist (SM)	Well Finish: Stick Up (34.25")
			0.116				Concrete
			0.147			12-24" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist, (SM)	Backfill (#00 Sand)
			0.115			24-33" Dark brown, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	Bentonite Seal
			0.124			33-37" Dark gray, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	2" PVC Riser
5	60/50		0.142			0-8" Dark gray, very fine to fine SAND and SILT, little fine Gravel, trace Clay, moist (SM)	
			0.122			8-21" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.128			21-32" Dark gray, very fine to medium SAND, little Silt, trace fine Gravel, moist (SW)	Sandpack (#00 Sand)
			0.118			32-34" Dark gray, CRUSHED ROCK, dry (GW)	
			0.110			34-50" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
10	60/57		0.117			0-39" Dark gray, very fine to medium SAND and SILT, little fine Gravel, wet at 11" (SM)	Screen (5-15' bgs) 2" 0.01" Slotted Schedule 40 PVC
			0.136				
			0.132				
			0.131				
			0.132			39-41" Gray, CRUSHED ROCK, dry (GW)	
15						41-57" Dark gray mottled brown, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
						End of boring at 17.5 feet below ground surface (refusal, likely on bedrock)	
20							
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/7/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** 12.5 **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 42.70
NOTES 60" length, 2" diameter poly core liner, to assess beneath the slab downgradient of boiler room

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/49		0.173	12SB10-1 (0-1/0.5)		0-6" CONCRETE SLAB (CONCRETE)	No Well Install
			0.135			6-14" CLINKER, moist (FILL)	
			0.101			14-24" Dark brown, very fine to medium SAND, some fine Gravel, little Silt, moist (SW)	
			0.102			24-49" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.102				
5	60/49		0.138	12SB10-2 (12-14/13)		0-3" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.118			3-7" Brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.109			7-39" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.103				
			0.108			39-49" Dark brown, very fine to medium SAND, moist (SW)	
10	60/54		0.273			0-23" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.132				
			0.104			23-41" Dark gray, very fine to fine SAND and SILT, little fine Gravel, wet (SM)	
			0.109				
			0.118			41-54" Dark gray, very fine to coarse SAND, some Silt, trace fine Gravel, moist (SW)	
15	60/49		0.188			0-12" Dark gray, very fine to coarse SAND, some Silt, trace fine Gravel, moist (SW)	
			0.174			12-45" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.176				
			0.152				
			0.159				
20						45-49" Dark gray, WEATHERED BEDROCK (BEDROCK)	
						End of boring at 20 feet below ground surface (refusal on bedrock)	
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/7/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 42.66
NOTES 60" length, 2" diameter poly core liner, to assess beneath the slab downgradient of boiler room

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/35		0.283	12SB11-1 (0.5-2.5/1.5)		0-6" CONCRETE SLAB (CONCRETE)	No Well Install
			0.015			6-18" CLINKER, moist (FILL)	
			0.017				
			0.021			18-34" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.007				
5	60/54		0.053	12SB11-2 (13-15/14)		34-35" Light gray, CONCRETE, dry (CONCRETE)	
			0.042			0-6" Light gray, CONCRETE, dry (CONCRETE)	
			0.033			6-33" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.032				
			0.030			33-54" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
10	60/43		0.051			0-19" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.153				
			0.051			19-36" Dark gray, very fine to medium SAND and SILT, little fine Gravel, wet (SM)	
			0.064				
			0.042			36-43" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
15	60/41		0.045			0-22" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.088				
			0.044				
			0.049			22-41" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.081				
20	12/6					0-6" Dark gray, very fine to coarse SAND, some Silt, moist (SW)	
						End of boring at 21 feet below ground surface (equipment refusal)	
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/7/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 43.16
NOTES 60" length, 2" diameter poly core liner, to assess sludge and oil debris at the boiler room sump

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0						0-7' Hollow Sonotube (NO CORE)	No Well Install
5							
	36/20		0.144			0-10" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.300				
			0.415	12SB8-1		10-14" CRUSHED BRICK, SONOTUBE LINER and PIT SLUDGE, some concrete, little very fine to fine Sand, little Silt, piece of Metal, unknown Odor (FILL)	
10	60/34		3.421			14-18" Gray, CRUSHED CONCRETE, dry (CONCRETE)	
			4.751			18-20" Dark gray, very fine to fine SAND and SILT, light fine Gravel, moist, petroleum odor [8.213 ppm at bottom] (SM)	
			8.904	12SB8-2 (11-13/12)		0-34" Dark gray, very fine to fine SAND and SILT, light fine Gravel, moist	
			3.268	12SB8-20		Gray Crushed Rock from 16-18" and 22-24", petroleum odor throughout [highest at top and bottom] (SM)	
			4.402				
15	60/60		3.910			0-28" Dark gray, very fine to fine SAND and SILT, light fine Gravel, moist, slight petroleum odor (SM)	
			9.912				
			7.824				
			5.516				
20						End of boring at 19 feet below ground surface (equipment refusal)	
25							



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Boring Log

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/7/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 42.87
NOTES 60" length, 2" diameter poly core liner, to assess sludge and oil debris in the vehicle maintenance pit

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0						No Core	No Well Install
5	60/46		0.251	12SB9-1		0-5" PIT SLUDGE with dark brown, very fine to fine Sand and Silt, Brick and Concrete Fragments, Paint Chips, and Metal Flakes	
			0.238			5-12" Gray CRUSHED CONCRETE, dry (CONCRETE)	
			0.235	12SB9-2 (6.5-7.5/7)		12-21" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.230			21-27" Light gray, CRUSHED ROCK, dry (GW)	
			0.232			27-46" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
10	60/60		0.246			0-4" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.217			4-9" Gray, very fine to medium SAND and CLAY, little fine Gravel, moist (SW-SC)	
			0.216			9-60" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.220				
			0.217				
15	24/24		0.208			0-4" Light gray, CRUSHED ROCK, dry (GW)	
			0.218			4-11" Dark gray, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
						11-19" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
						19-24" Gray, WEATHERED BEDROCK (BEDROCK)	
						End of boring at 17 feet below ground surface (refusal on bedrock)	
20							
25							

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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 29.22
NOTES 60" length, 2" diameter poly core liner, to vertically delineate PAHs in 13DU1

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/39		0.095	13SB11-1 (1-2)		0-4" Brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.094			4-17" Brown, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.095			17-39" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.091				
			0.093				
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA,
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 29.40
NOTES 60" length, 2" diameter poly core liner, to vertically delineate PAHs in 13DU1

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/38		0.100	13SB12-1 (1-2)		0-2" Brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.107			2-21" Brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.105				
			0.107			21-36" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.104				
5						36-38" Dark brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 27.92
NOTES 60" length, 2" diameter poly core liner, to vertically delineate PAHs in 13DU1

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/38		0.124	13SB13-1 (1-2)		0-18" Brown, very fine to fine SAND and SILT, some Organics, little fine Gravel, moist (SM)	No Well Install
			0.127			18-21" Brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.126			21-29" Dark gray, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.122			29-38" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.122			End of boring at 5 feet below ground surface (no refusal)	
5							
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 33.44
NOTES 60" length, 2" diameter poly core liner, to vertically delineate PAHs in 13DU2

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/51		0.165	13SB14-1 (1-2)		0-6" Dark brown, very fine to fine SAND and SILT, some Organics, trace fine Gravel, moist (SM)	No Well Install
			0.132			6-10" Light gray, CRUSHED ROCK, dry (GW)	
			0.138			10-21" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.154			21-29" Brown, very fine to fine SAND, little fine Gravel, moist (SP)	
			0.138			29-39" Dark brown, very fine to fine SAND, some Silt, trace fine Gravel, moist (SP)	
5						39-51" Brown, very fine to fine SAND, moist (SP)	
						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 32.53
NOTES 60" length, 2" diameter poly core liner, to vertically delineate PAHs in 13DU2

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/47		0.165	13SB15-1 (1-2)		0-7" Dark brown, very fine to fine SAND, some Silt, some Organics, little fine Gravel, moist (SP)	No Well Install
			0.160			7-20" Brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.155			20-31" Dark brown, very fine to medium SAND, little fine Gravel, trace Silt, moist (SW)	
			0.184			31-47" Dark gray, very fine to medium SAND, some fine Gravel, little Silt, moist (SW)	
			0.161				
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Moira Wentworth **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 14.23
NOTES 60" length, 2" diameter poly core liner, depth below soil within foundation of degaussing building

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/21		0.115			0-8" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (FILL)	No Well Install
			0.105				
			0.106			8-10" WOOD, PAINT, METAL FLAKES	
			0.112	36SB2-1 (2-4/3)		10-12" Light brown, very fine to medium SAND, moist (SW)	
						12-17" Brown, very fine to fine SAND and SILT, little fine Gravel, moist [piece of metal] (SM)	
			0.103			17-21" Light brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
5	60/45		0.020			0-2" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.028			2-17" Light brown, very fine to fine SAND and SILT, some Clay, moist (SM)	
			0.032			17-45" Olive gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.034				
			0.033				
10	60/60		0.057			0-9" Olive gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.055			9-21" Light brown, very fine to fine SAND, some Silt, little fine Gravel, moist (SP)	
			0.053			21-40" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.051				
			0.056			40-60" Brown mottled gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
15	60/48		0.047			0-10" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.052			10-13" Gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.052			13-18" Orange brown, very fine to coarse SAND, some Silt, moist (SW)	
			0.064			18-22" Light brown, very fine to coarse SAND, some Silt, moist	
			0.070			22-48" Gray, WEATHERED BEDROCK, dry (BEDROCK)	
20						End of boring at 20 feet below ground surface (refusal on bedrock)	
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 16.21
NOTES 60" length, 2" diameter poly core liner, depth below soil within foundation of degaussing building

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/36		0.083	36SB3-1 (2-4/3)		0-14" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (FILL)	No Well Install
			0.089			14-16" Brown, very fine to fine SAND and SILT, some Wood, little Paint/Metal Chips, moist (SM)	
			0.081			16-27" Dark brown, very fine to medium SAND, some Silt, little fine Gravel, moist (SW)	
			0.081			27-36" Brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.088				
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA,
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 15.45
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU2)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/40		0.173	38SB1-1 (1-2/1.5)		0-11" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	No Well Install
			0.175			11-25" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.178				
			0.170			25-31" Brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.176			31-40" Light brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Moirá Wentworth **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 14.55
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU2)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/34		0.239	38SB2-1 (1-2/1.5)		0-6" Brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.241			6-17" Brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.235			17-26" Black, COAL, little fine Gravel, moist (COAL)	
			0.240			26-34" Brown, very fine to fine SAND, some Silt, little fine Gravel, moist (SP)	
			0.240				
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA,
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 15.13
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU3)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/43		0.151	38SB3-1 (1-2/1.5)		0-10" Dark gray, very fine to fine SAND and SILT, some fine Gravel, little Clay, moist (SM)	No Well Install
			0.152			10-21" Brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.149			21-28" Dark brown, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.135			28-35" Brownish orange, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.143			35-43" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA,
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 15.02
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU3)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/42		0.162	38SB4-1 (1-2/1.5) 38SB4-10		0-3" Dark brown very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.162			3-7" Dark brown, fine GRAVEL, some very fine to fine Sand, some Silt, moist (GP)	
			0.177			7-28" Brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.217			28-42" Brown/orange, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.211				
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA,
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 14.55
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU3)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/48		0.210	38SB5-1 (1-2/1.5)		0-8" Dark brown very fine to fine SAND and SILT, little Organics, moist (SM)	No Well Install
			0.200			8-23" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.196			23-26" Brownish-orange, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.196			26-32" Lighter brown, very fine to medium SAND and SILT, trace fine Gravel, moist (SM)	
			0.196			32-48" Olive gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 14.02
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU4)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/46		0.206	38SB6-1 (1-2/1.5)		0-3" Dark gray, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.210			3-10" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.217			10-18" Brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.213			18-25" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist (SM)	
			0.222			25-34" Black coal, dry (COAL)	
5						34-46" Brown very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							



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Boring Log

38SB7
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA,
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 14.68
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4 (SU4)

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/42		0.218	38SB7-1 (1-2/1.5)		0-10" Dark brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.248			10-25" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist, clinker at 15"(SM)	
			0.231				
			0.238			25-42" Brown very fine to medium SAND, little Silt, little fine Gravel, moist (SW)	
			0.236				
5						End of boring at 5 feet below ground surface (no refusal)	
10							
15							
20							
25							

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Boring Log

38SB8
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/6/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 13.96
NOTES 60" length, 2" diameter poly core liner, to vertically delineate COPCs beneath 38DU4

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/40		0.186	38SB8-1 (1-2/1.5) 38SB8-10		0-10" Dark brown, very fine to fine SAND and SILT, some Organics, moist (SM)	No Well Install
			0.185			10-19" Dark brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.208			19-25" Brownish orange, very fine to fine SAND and SILT, trace fine Gravel, moist (SM)	
			0.204			25-32" Light brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.197			32-40" Gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
5	60/51		0.189			0-18" Gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.188			18-51" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.195				
			0.192				
			0.189				
10	60/55		0.183			0-3" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.189			3-7" Brown, very fine to fine SAND and SILT, little fine Gravel, moist (SM)	
			0.193			7-16" Gray CRUSHED ROCK, dry (GW)	
			0.191			16-29" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist (SM)	
			0.191			29-55" Dark gray, WEATHERED BEDROCK, dry, wet at bottom 2" (BEDROCK)	
15						End of boring at 15 feet below ground surface (refusal on weathered bedrock)	
20							
25							



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Boring Log

50ASB1
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 42.94
NOTES 60" length, 2" diameter poly core liner, to assess for release from Switch House pit north, boring advanced at 30 degree angle

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/36		0.061			0-1" Dark gray, very fine to fine SAND and SILT, little organics, moist, calculated bgs 0-0.12' (SM)	No Well Install
			0.058			1-12" Dark gray, very fine to fine SAND and SILT, little crushed Rock, moist, calculated bgs 0.12-1.44' (SM)	
			0.055			12-25" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 1.44-3.01' (SM)	
			0.057				
			0.055			25-36" Olive gray, very fine to fine SAND and SILT, trace fine Gravel, moist, calculated bgs 3.01-4.33' (SM)	
5	60/44		0.061			0-5" Olive gray, very fine to fine SAND and SILT, trace fine Gravel, moist, calculated bgs 4.33-4.82' (SM)	
			0.064			5-12" Olive gray, very fine to fine SAND and SILT, little Clay, trace fine Gravel, moist, calculated bgs 4.82-5.51' (SM)	
			0.064			12-26" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 5.51-6.89' (SM)	
			0.063			26-44" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist, calculated bgs 6.89-8.66' (SW)	
			0.066				
10	60/47		0.076	50ASB1-1 (10-11)		0-12" Dark gray, very fine to medium SAND, some Silt, little fine Gravel, moist, calculated bgs 8.66-9.77' (SW)	
			0.078			12-31" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 9.77-11.52' (SM)	
			0.072				
			0.075			31-34" Gray, CRUSHED ROCK, dry, calculated bgs 11.52-11.79' (GW)	
			0.075			34-47" Olive gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 11.79-13' (GW)	
15						End of boring at 15 feet at 30 degree angle, 13 feet bgs, no refusal	
						Inches in the description column reflect the boring at the 30 angle from 0-15 feet.	
						Actual depth below ground surface is provided in the descriptions above.	
20							
25							



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Boring Log

50ASB2
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 43.97
NOTES 60" length, 2" diameter poly core liner, to assess for release from Switch House pit south, boring advanced at 30 degree angle

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/39		0.098			0-2" Dark brown, very fine to fine SAND and SILT, little organics, little concrete, moist, calculated bgs 0-0.22' (SM)	No Well Install
			0.096			12-5" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 0.22-0.56' (SM)	
			0.089			5-7" Light brown, very fine to medium SAND, moist, calculated bgs 0.56-0.78' (SW)	
			0.099			17-21" Dark gray, very fine to fine SAND, some SILT, little fine Gravel, moist, calculated bgs 0.78-2.33' (SP)	
			0.096			21-34" Dark gray mottled brown, very fine to fine SAND and SILT, some fine Gravel, moist, calculated bgs 2.33-3.76' (SM)	
5	60/39		0.108			34-39" Dark gray, very fine to medium SAND, little fine Gravel, little Silt, moist, calculated bgs 3.76-4.33' (SW)	
			0.105			0-10" Dark gray, very fine to medium SAND, little fine Gravel, little Silt, moist, calculated bgs 4.33-5.44' (SW)	
			0.104			10-14" Dark brown, very fine to medium SAND, little fine Gravel, moist, calculated bgs 5.44-5.88' (SW)	
			0.095			14-28" Olive gray, very fine to fine SAND and SILT, some fine Gravel, moist, calculated bgs 5.88-7.44' (SM)	
			0.100			28-39" Dark gray, very fine to fine SAND, little Silt, little fine Gravel, moist, calculated bgs 7.44-8.66' (SP)	
10	60/49		0.112	50ASB1-1 (10-11)		0-8" Dark gray, very fine to fine SAND, little Silt, little fine Gravel, moist, calculated bgs 8.66-9.37' (SP)	
			0.095			8-40" Dark gray, very fine to medium SAND and SILT, some fine Gravel, moist, calculated bgs 9.37-12.20' (SM)	
			0.102				
			0.095				
			0.104				
15						40-43" Dark gray, CRUSHED ROCK, dry, calculated bgs 12.20-12.46' (GW)	
						43-49" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 12.46-13' (SM)	
						End of boring at 15 feet at 30 degree angle, 13 feet bgs, no refusal	
						Inches in the description column reflect the boring at the 30 angle from 0-15 feet.	
						Actual depth below ground surface is provided in the descriptions above.	
20							
25							



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Boring Log

50ASB3
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** Not Encountered **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 46.72
NOTES 60" length, 2" diameter poly core liner, to assess for release from Switch House pit east, boring advanced at 30 degree angle

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/33		0.130			0-4" Dark gray, very fine to fine SAND, some Silt, moist, calculated bgs 0-0.52' (SP)	No Well Install
			0.119			4-19" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist (root at 13"), calculated bgs 0.52-2.49' (SM)	
			0.110				
			0.112			19-22" Dark gray, CRUSHED ROCK, little very fine to fine Sand, moist, calculated bgs 2.49-2.89' (GW)	
			0.117			22-33" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist, calculated bgs 2.89-4.33' (SM)	
5	60/41		0.145			0-26" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist, calculated bgs 4.33-7.08' (SM)	
			0.116				
			0.118				
			0.118			26-41" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist, calculated bgs 7.08-8.66' (SM)	
			0.116				
10	60/50		0.114	50ASB1-1 (10-11)		0-14" Dark gray, very fine to medium SAND and SILT, little fine Gravel, moist, calculated bgs 8.66-9.87' (SM)	
			0.120			14-35" Dark gray, very fine to fine SAND and SILT, little Clay, trace fine Gravel, moist, calculated bgs 9.87-11.69' (SM)	
			0.115				
			0.117				
			0.114			35-50" Dark brown, very fine to medium SAND, some Silt, little fine Gravel, moist, calculated bgs 11.69-13' (SW)	
15						End of boring at 15 feet at 30 degree angle, 13 feet bgs, no refusal	
						Inches in the description column reflect the boring at the 30 angle from 0-15 feet.	
						Actual depth below ground surface is provided in the descriptions above.	
20							
25							



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Boring Log

50ASB4
PAGE 1 OF 1

CLIENT USACE CENAE **PROJECT NAME** Gould Island
PROJECT # 16001327 **PROJECT LOCATION** Gould Island, Jamestown, Rhode Island
DATE STARTED 4/4/22 **LOGGED BY** Samantha Foote **DEPTH TO WATER** 14.167 **WELL DIAMETER** NA
CONTRACTOR New England Geotech/Maynor Mandoza **WELL MATERIALS** NA
DRILLING METHOD Direct Push **ANNULUS MATERIALS** NA
DRILLING EQUIPMENT Geoprobe 7822 DT, borehole diam. 3.25" **MP ELEVATION** **GROUND ELEVATION** 44.60
NOTES 60" length, 2" diameter poly core liner, to assess for release from Switch House pit west, boring advanced at 30 degree angle

Depth (ft)	Penetration/ Recovery (in)	Blow Counts	Field Screening (ppm)	Lab Analytical Sample	Graphic Log	LITHOLOGY	WELL DIAGRAM
0	60/40		0.146			0-3" Dark brown, very fine to fine SAND and SILT, some Organics, moist, calculated bgs 0-0.32' (SM)	No Well Install
			0.138			3-8" Dark gray, very fine to medium SAND, trace Silt, moist, calculated bgs 0.32-0.87' (SW)	
			0.125			8-12" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 0.86-1.30' (SM)	
			0.128			12-13" Orange brown, very fine to medium SAND, moist, calculated bgs 1.30-1.41' (SW)	
			0.121			13-40" Dark gray, very fine to fine SAND, little Silt, little fine Gravel, moist, calculated bgs 1.41-4.33' (SP)	
5	60/42		0.129			0-22" Dark gray, very fine to fine SAND, little Silt, little fine Gravel, moist, calculated bgs 4.33-6.60' (SP)	
			0.118				
			0.124				
			0.118			22-32" Dark gray, very fine to fine SAND and SILT, little fine Gravel, moist, calculated bgs 6.60-7.63' (SM)	
			0.119			32-35" Light gray, CRUSHED ROCK, dry, calculated bgs 7.63-7.94' (GW)	
10	60/48		0.118	50ASB1-1 (10-11)		35-42" Brown, very fine to fine SAND, moist, calculated bgs 7.94-8.66' (SP)	
			0.114			0-13" Brown, very fine to fine SAND, moist, calculated bgs 8.66-9.83' (SP)	
			0.112			13-28" Gray, very fine to medium SAND, little Silt, little fine Gravel, moist, calculated bgs 9.83-11.19' (SW)	
			0.138			28-40" Dark gray, very fine to fine SAND and SILT, some fine Gravel, moist, calculated bgs 11.19-12.27' (SM)	
15			0.107			40-48" Dark gray, very fine to fine SAND and SILT, some fine Gravel, wet, calculated bgs 12.27-13' (SM)	
						End of boring at 15 feet at 30 degree angle, 13 feet bgs, no refusal	
						Inches in the description column reflect the boring at the 30 angle from 0-15 feet.	
						Actual depth below ground surface is provided in the descriptions above.	
20							
25							



11OBMW1

SITE INFORMATION

Date Start/Finish: 4/5/22-4/5/22

Credere Representative:
Samantha Foote and Moira Wentworth

DRILLING EQUIPMENT

Casing Material:	Steel
-------------------------	-------

CONTRACTOR

Drilling Contractor/Foreman:
New England Geotech/Maynor Mandoza



Generalized description of overburden:

Dark gray, very fine to medium SAND and SILT, varying amounts of fine Gravel

Borehole diameter (in): 3.25

Backfill material: Sand

Backfill depth (ft): 1-2 bgs

Well riser material: PVC

Well riser length (ft): 5

Well riser diameter (in): 2

Bentonite depth interval (ft): 2-4 bgs

Screen material: PVC

Well diameter (in): 2

Screen length (ft): 10 (5-15' bgs)

Annulus material: Sand

Annulus depth interval (ft): 4-15

Depth to water (ft bgs): 7.89

Depth of borehole (ft): 17.5

Development method: Overpumping and Agitation

Total well volume (g):	1.15
------------------------	------

Total purge volume (g):	4
-------------------------	---

No. of well volumes purged: 3.5

Final turbidity (NTU): >10 NTU

Field Parameters

DO (mg/L): -

pH: -

Sp. Conductivity (mS/cm): -

ORP (mV): -

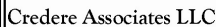
Temperature (°C): -

Depth of stable GW during
purge (ft bgs):

Annulus material size: #00 #1 #2 G

Remarks and Well Details	
1	2
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93	94
95	96
97	98
99	100

Well ID: 11OBMW1



11OBMW2

SITE INFORMATION

Date Start/Finish: 4/5/22-4/5/22

Credere Representative:
Samantha Foote and Moira Wentworth

DRILLING EQUIPMENT

Casing Material:	Steel
-------------------------	-------

CONTRACTOR

Drilling Contractor/Foreman:
New England Geotech/Maynor Mandoza



Generalized description of overburden:

Dark gray, very fine to medium SAND and SILT, varying amounts of fine Gravel

Borehole diameter (in): 3.25

Backfill material: Sand

Backfill depth (ft): 1-2 bgs

Well riser material: PVC

Well riser length (ft): 5

Well riser diameter (in): 2

Bentonite depth interval (ft): 2-4 bgs

Screen material: PVC

Well diameter (in): 2

Screen length (ft): 10 (5-15' bgs)

Annulus material: Sand

Annulus depth interval (ft): 4-15

Depth to water (ft bgs): 10.02

Depth of borehole (ft): 15

Development method: Overpumping and Agitation

Total well volume (g):	0.79
------------------------	------

Total purge volume (g):	3
-------------------------	---

No. of well volumes purged: 3.75

Final turbidity (NTU): >10 NTU

Field Parameters

DO (mg/L): -

pH: -

Sp. Conductivity (mS/cm): -

ORP (mV): -

Temperature (°C): -

Depth of stable GW during purge (ft bgs): Did not stabilize

Annulus material size: #00 #1 #2 G

Remarks and Well Details

Well ID: 11OBMW2

APPENDIX C

SURFACE SOIL, ISM, AND OUTFALL SAMPLE LOGS

SURFACE SOIL/SEDIMENT SAMPLE LOG

CREDERE ASSOCIATES. LLC



PROJECT NAME/NUMBER: Gould Island/16001327

CLIENT/LOCATION: USACE/Gould Island, Narragansett Bay, Rhode Island

FIELD PERSONNEL: Samantha Foote, Moira Wentworth, Nathaniel weiss

See Sample
DATE: IDs

Site Notes & Information:

SAMPLING INFORMATION:

Surface Soil/Sediment Sample Location	Sample Depth (inches)	Soil Description (evidence of contamination, PID reading, fill, etc.)
OF-9 (4/8/2022)	0-12	Dark gray, wet, very fine to fine SAND and SILT, little Clay, trace fine Gravel
OF-10 (4/8/2022)	0-12	Gray and brown, wet, fine to coarse SAND and fine GRAVEL, little Shells
OF-11 (4/11/2022)	0-12	Gray and dark gray, wet, fine to coarse SAND, some Shells, little fine Gravel (overlain by cobbles) Submerged at the time of sample collection during low tide
OF-12 (4/11/2022)	0-12	Gray and dark gray, wet, fine to coarse SAND, some Shells, little fine Gravel (overlain by cobbles) Submerged at the time of sample collection during low tide
OF-13 (4/11/2022)	0-12	Gray and dark gray, wet, fine to coarse SAND, some Shells, little fine Gravel (overlain by cobbles) Submerged at the time of sample collection during low tide
OF-14 (4/11/2022)	0-12	Gray and dark gray, wet, fine to coarse SAND, some Shells, little fine Gravel Submerged at the time of sample collection during low tide
OF-15 (4/8/2022)	0-12	Gray, wet, fine to coarse SAND and fine GRAVEL (overlain by cobbles)
12SS-6 (4/4/2022)	6-12	Dark brown, moist, very fine to fine SAND and SILT, little fine Gravel, little Building Debris (brick, metal, glass), little Roots
12SS-7 (4/4/2022)	6-12	Dark brown, moist, very fine to fine SAND and SILT, little fine Gravel, little Building Debris (brick, metal, glass), little Roots
12SS-8 (4/4/2022)	6-12	Dark brown, moist, very fine to fine SAND and SILT, little fine Gravel, little Building Debris (brick, metal, glass), little Roots
01DU1 (4/7/2022)	Penetration: 8-12 Recovery: 6-10	Dark gray to black, moist to wet, SILT, some Clay, little very fine to coarse Sand, trace fine Gravel, trace Coal
10DU3-SU1 (4/11/2022)	Penetration: 6-10 Recovery: 6-10	Dark gray to black, dry, SILT and very fine to coarse SAND, some fine Gravel, little cobbles, little coarse Gravel, trace wood, trace coal
10DU3-SU2 (4/11/2022)	Penetration: 6-10 Recovery: 6-10	Dark brown, moist, very fine to medium SAND, some Silt, some fine Gravel, trace coal (solidified tar in southwest corner within 0-1 foot below ground surface)
10DU3-SU3 (4/11/2022)	Penetration: 8-10 Recovery: 6-10	Dark brown to gray, dry, very fine to coarse SAND and SILT, some fine Gravel, little cobbles, trace coal, trace wood/burnt wood, trace tar/oil, trace coal/suspect coal ash
10DU3-SU4 (4/11/2022)	Penetration: 8-12 Recovery: 6-10	Dark brown to gray, dry to moist, very fine to coarse SAND and SILT, some fine Gravel, trace cobbles, trace coal, trace wood
13DU1 (4/8/2022)	Penetration: 8-12 Recovery: 6-10	Dark gray, moist, very fine to fine SAND and SILT, organic matter

Note: sample analyses, volume, and preservatives are summarized in field notes.

SAMPLER

**SURFACE SOIL/SEDIMENT SAMPLE LOG
CREDERE ASSOCIATES. LLC**



PROJECT NAME/NUMBER: Gould Island/16001327

CLIENT/LOCATION: USACE/Gould Island, Narragansett Bay, Rhode Island

FIELD PERSONNEL: Samantha Foote, Moira Wentworth, Nathaniel weiss

See Sample
DATE: IDs

Site Notes & Information:

SAMPLING INFORMATION:

Surface Soil/Sediment Sample Location	Sample Depth (inches)	Soil Description (evidence of contamination, PID reading, fill, etc.)
13DU2 (4/8/2022)	Penetration: 8-12 Recovery: 6-10	Dark gray, dry to moist, SILT, some very fine to coarse SAND, little Clay, trace wood
38DU4-SU1 (4/7/2022)	Penetration: 8-10 Recovery: 6-8	Dark gray to black, moist to wet, fine to coarse SAND and SILT, little fine Gravel, trace wood, trace coal/clinker
38DU4-SU2 (4/7/2022)	Penetration: 10-12 Recovery: 8-12	Dark gray to black, moist to wet, fine to coarse SAND and SILT, little fine Gravel, trace wood, trace coal/clinker
38DU4-SU3 (4/8/2022)	Penetration: 8-12 Recovery: 6-12	Dark brown and gray, moist to wet, fine to coarse SAND and SILT, little fine Gravel (brick and tile patio suspected in northern portion adjacent to degaussing building foundation; brick and tile observed)
38DU4-SU4 (4/8/2022)	Penetration: 8-12 Recovery: 6-12	Dark brown and gray, moist to wet, fine to coarse SAND and SILT, little fine Gravel (brick and tile patio suspected in northern portion adjacent to degaussing building foundation; brick and tile observed)
50DU1 (4/8/2022)	Penetration: 10-12 Recovery: 8-12	Dark gray to black, moist to wet, SILT, little fine to medium Sand, little Clay, trace fine Gravel

Note: sample analyses, volume, and preservatives are summarized in field notes.

SAMPLER

APPENDIX D

GROUNDWATER SAMPLING LOGS AND CALIBRATION FORMS

LOW FLOW SAMPLING LOG (PERISTALTIC PUMP)
Credere Associates, LLC, 776 Main Street, Westbrook, ME 04092



PROJECT NAME: Gould Island HTRW 2022

DATE: 4/26/22

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

SAMPLE LOCATION ID: 1108MW1

FINAL MONITORING PARAMETERS AFTER SAMPLING

TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)
1730	4.87	0.154	6.57	-239.8	4.51	90	100	15.86

SAMPLE DATA:

SAMPLE BOTTLE ID		PRESERVATION	SAMPLE CONTAINER		LABORATORY ANALYSIS
TIME	LOCATION	METHOD	#	TYPE	
1345	1108MW1	HCL	2	40 mL VOA	VOC
		HCL	2	40 mL VOA	VPH
		HCL	1	1 L Amber	EPH
		None	1	1 L Amber	PAHs w/ SIM

PURGE DATA

☒ 0.04 GAL/FT (1" DIAM.) x length of water column = 6.39
☒ 0.16 GAL/FT (2" DIAM.)
☐ 0.65 GAL/FT (4" DIAM.) Total Well Volume: 1.02
☐ 1.47 GAL/FT (6" DIAM.) Total Purge Volume: ~0.75
 # of well volumes: < 1

COMMENTS

DUE TO DRAWDOWN & LEAK TO LITTLE OR NO RECHARGE WELL
SAMPLED NO PURGE.

DETAILED STABILIZATION CRITERIA

pH: ±0.1 standard units
 Temperature: ± 3%
 ORP: ±10 mV
 DO: less than 0.5 mg/L or ±10% for values greater than 0.5 mg/L
 Specific conductivity: ± 3%
 Turbidity: <5 NTU or 10% for reading >5 NTU (filtered only)
 Drawdown: no more than 0.3 feet

SAMPLER INFORMATION

Name (printed): STACY TOWN

Signature: [Signature]

LOW FLOW SAMPLING LOG (PERISTALTIC PUMP)
Credere Associates, LLC, 776 Main Street, Westbrook, ME 04092



PROJECT NAME: Gould Island HTRW 2022

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

SAMPLE LOCATION ID: 110BMWZ

DATE: 4/26/22

LOCATION ACTIVITY

START: 1036

END: 1340

WELL DATA:

WELL DEPTH (ft): <u>17.17</u>	☒ MEASURED	☒ TOP OF WELL	WATER LEVEL EQUIPMENT USED: ☒ ELECT. COND. PROBE ☐ FLOAT ACTIVATED PROBE ☐ PRESSURE TRANSDUCER
	☐ HISTORICAL	☐ TOP OF CASING	
WATER DEPTH (ft): <u>11.95</u>	☒ MEASURED	☐ FROM GRADE	
	☐ HISTORICAL	☐	

DEPTH OF PUMP INTAKE (ft): 14.5 Stick-up (in): 34.25 AMBIENT AIR VOC: 0.00 PPM

WELL MOUTH VOC: 0.439 PPM

WELL MATERIAL:	WELL	PROTECTIVE CASING	CONCRETE COLLAR	PVC or CASING
☒ PVC	LOCKED:	SECURE:	INTACT:	HEAVING?:
☐ SS	☒ YES	☒ YES	☒ YES ☐ NA	☐ YES ☐ NA
☐	☐ NO	☐ NO	☐ NO	☒ NO

EQUIPMENT DATA:

PURGING SAMPLING	PURGING & SAMPLING	DECONTAMINATION
☒ Peristaltic Pump	Geopump peristaltic pump	FLUIDS USED:
☐ Submersible	Water Level Meter: <u>Interface</u>	☐ DISTILLED WATER
☐ Bladder pump	YSI <u>Quatro</u> sonde with <u>250mL</u> flow cell	☒ DEIONIZED WATER
☐ Hand pump	YSI Sonde SN: <u>21m100503</u>	☐ POTABLE WATER
☐ Dedicated HDPE	YSI <u>Port</u> Handset	☐ TSP SOLUTION
☐ New HDPE	YSI Handset SN: <u>17E100949</u>	☒ ALCONOX SOLUTION
☒ Dedicated Teflon Lined LDPE	Hach 2100 Turbidity Meter	☐ NONE
☐ New Teflon Lined LDPE	Turbidity Meter SN: <u>21m1201200002142</u>	
☐ Filter (0.45 micron)	Sampler: <u>Nate Weiss</u>	

FIELD ANALYSIS DATA:

FIELD ANALYSIS DATA:									
TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)	Comments/Flow Rate (Indicate stable flow rate)
1040							100	11.95	pump on, purging
1111							100	14.35	w/o parameters.
purging while sampling another well									
well would run dry at lowest pump rate,									
allowing to recharge. will attempt purge									
a second time with YSI for several parameters.									
1150	10.0	6.19	0.210	-121.9	6.13	16.1	100	13.78	pump on
		↖ ↗							
1155	10.1	0.2078	6.08	-107.6	1.50	8.87	100	14.48	
1200	10.0	0.2070	6.01	-51.9	1.54	8.64	100	14.81	drew down over
									one foot. well
									would run dry.
1205									sampled no
									purge.
filled vials. Allowing to recharge for filter									
ambers as water is within 2 feet from									
bottom.									
1328									finished sampling

LOW FLOW SAMPLING LOG (PERISTALTIC PUMP)
Credere Associates, LLC, 776 Main Street, Westbrook, ME 04092



PROJECT NAME: Gould Island HTRW 2022

DATE: 4/26/22

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

SAMPLE LOCATION ID: 1108mw2

FINAL MONITORING PARAMETERS AFTER SAMPLING

TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)
1330	10.4	0.1866	6.37	-32.0	5.31	10.7	100	15.1

SAMPLE DATA:

SAMPLE BOTTLE ID		PRESERVATION	SAMPLE CONTAINER		LABORATORY
TIME	LOCATION	METHOD	#	TYPE	ANALYSIS
1205	1108mw2	HCL	2	40 mL VOA	VOC
↓	↓	HCL	2	40 mL VOA	VPH
		HCL	1	1 L Amber	EPH
		None	1	1 L Amber	PAHs w/ SIM

PURGE DATA ☐ 0.04 GAL/FT (1" DIAM.) x length of water column = 5.22
☒ 0.16 GAL/FT (2" DIAM.)
☐ 0.65 GAL/FT (4" DIAM.) Total Well Volume: 0.8352 gallons
☐ 1.47 GAL/FT (6" DIAM.) Total Purge Volume: 0.46 gallons
of well volumes: 0.55

COMMENTS

DETAILED STABILIZATION CRITERIA

pH: ±0.1 standard units
Temperature: ± 3%
ORP: ±10 mV
DO: less than 0.5 mg/L or ±10% for values greater than 0.5 mg/L
Specific conductivity: ± 3%
Turbidity: <5 NTU or 10% for reading >5 NTU (filtered only)
Drawdown: no more than 0.3 feet

SAMPLER INFORMATION

Name (printed): Nate Weiss Signature: [Signature]

DATE: 4/24/22

LOCATION ACTIVITY

START: 0170

END: 1110

WELL DATA:	☒ MEASURED	☒ TOP OF WELL	WATER LEVEL EQUIPMENT USED:
WELL DEPTH (ft): <u>16.50'</u>	☐ HISTORICAL	☐ TOP OF CASING	☒ ELECT. COND. PROBE
	☒ MEASURED	☐ FROM GRADE	☐ FLOAT ACTIVATED PROBE
WATER DEPTH (ft): <u>14.14'</u>	☐ HISTORICAL	☐ _____	☐ PRESSURE TRANSDUCER

DEPTH OF PUMP INTAKE (ft): 15.0' Stick-up (in): 39.12" AMBIENT AIR VOC: 0.000 PPM

AMBIENT AIR VOC: 0.000 PPM

WELL MOUTH VOC: 0.03 PPM

WELL MATERIAL:	WELL	PROTECTIVE CASING	CONCRETE COLLAR	PVC or CASING
[✓] PVC	LOCKED:	SECURE:	INTACT:	HEAVING?:
[] SS	[✓] YES	[✓] YES	[] YES [✓] NA	[] YES [✓] NA
[]	[] NO	[] NO	[] NO	[] NO

FLUIDS USED:

☒	☒	Peristaltic Pump
☐	☐	Submersible
☐	☐	Bladder pump
☐	☐	Hand pump
☐	☐	Dedicated HDPE
☐	☐	New HDPE
☐	☐	Dedicated Teflon Lined LDPE
☒	☒	New Teflon Lined LDPE
☐	☐	Filter (0.45 micron)

Geopump peristaltic pump
Water Level Meter: 14722 SS6 sonde with 200 mL flow cell
YSI SS6 sonde SN: 14722
YSI SS6 Handset
YSI Handset SN: 15A101441
Hach 2100 Turbidity Meter
Turbidity Meter SN: 150700640050
Sampler: S.TOWNE

☐	DISTILLED WATER
☒	DEIONIZED WATER
☐	POTABLE WATER
☐	TSP SOLUTION
☒	ALCONOX SOLUTION
☐	NONE

[illegible]

Sampler's Initials *LSW*

LOW FLOW SAMPLING LOG (PERISTALTIC PUMP)
Credere Associates, LLC, 776 Main Street, Westbrook, ME 04092



PROJECT NAME: Gould Island HTRW 2022

DATE: 4/26/22

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

SAMPLE LOCATION ID: 1203 MW 1

FINAL MONITORING PARAMETERS AFTER SAMPLING

TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)
1135	11.07	6.439	6.56	228.4	6.43	10.82	100	14.85

SAMPLE DATA:

SAMPLE BOTTLE ID		PRESERVATION	SAMPLE CONTAINER		LABORATORY
TIME	LOCATION	METHOD	#	TYPE	ANALYSIS
1105	1203 MW 1	HCL	—	40 mL VOA	VOC
1105	1203 MW 1	HCL	—	40 mL VOA	VPH
1105	1203 MW 1	HCL	—	1 L Amber	EPH
1105	1203 MW 1	None	—	1 L Amber	PAHs w/ SIM

PURGE DATA [] 0.04 GAL/FT (1" DIAM.) x length of water column = 2.71
 [☒] 0.16 GAL/FT (2" DIAM.)
 [] 0.65 GAL/FT (4" DIAM.) Total Well Volume: 0.434
 [] 1.47 GAL/FT (6" DIAM.) Total Purge Volume: ≈ 0.5 GAL
 # of well volumes: 1

COMMENTS DUE TO DRAWDOWN + WEAK BATTERY WELL SAMPLED NO PURGE.

DETAILED STABILIZATION CRITERIA

pH: ±0.1 standard units
 Temperature: ± 3%
 ORP: ±10 mV
 DO: less than 0.5 mg/L or ±10% for values greater than 0.5 mg/L
 Specific conductivity: ± 3%
 Turbidity: <5 NTU or 10% for reading >5 NTU (filtered only)
 Drawdown: no more than 0.3 feet

SAMPLER INFORMATION

Name (printed): STACY N TOWNE

Signature: *Stacy Towne*

DATE: 4/26/22

LOCATION ACTIVITY

120BMW2 (120BMW20)

START: 935
END: 1420

WELL DATA:		[X] MEASURED		[X] TOP OF WELL		WATER LEVEL EQUIPMENT USED:	
WELL DEPTH (ft):	<u>16.90</u>	[] HISTORICAL		[] TOP OF CASING		[X] ELECT. COND. PROBE	
WATER DEPTH (ft):	<u>13.02</u>	[X] MEASURED		[] FROM GRADE		[] FLOAT ACTIVATED PROBE	
		[] HISTORICAL		[]		[] PRESSURE TRANSDUCER	
DEPTH OF PUMP INTAKE (ft):	<u>15.95</u>	Stick-up (in):	<u>14.0</u>	<u>34.12"</u>		AMBIENT AIR VOC:	<u>0.220</u> PPM
				<u>34.25"</u>		WELL MOUTH VOC:	<u>0.321</u> PPM
WELL MATERIAL:	WELL	PROTECTIVE CASING	CONCRETE COLLAR	PVC or CASING			
[X] PVC	LOCKED:	SECURE:	INTACT:	HEAVING?:			
[] SS	[X] YES	[X] YES	[X] YES: [] NA	[] YES [] NA			
[]	[] NO	[] NO	[] NO	[X] NO			

PURGING SAMPLING

☒	☒	Peristaltic Pump
☐	☐	Submersible
☐	☐	Bladder pump
☐	☐	Hand pump
☐	☐	Dedicated HDPE
☐	☒	New HDPE
☒	☒	Dedicated Teflon Lined LDPE
☐	☐	New Teflon Lined LDPE
☐	☐	Filter (0.45 micron)

Geopump peristaltic pump
Water Level Meter: Interface
YSI ~~Quattro~~ Sonde with 350 mL flow cell
YSI Sonde SN: 19 711100503
YSI ~~9107~~ Handset
YSI Handset SN: 17E100949
Hach 2100 Turbidity Meter
Turbidity Meter SN: 20120D002142
Sampler: Nate Weiss

FLUIDS USED:

☐	DISTILLED WATER
☒	DEIONIZED WATER
☐	POTABLE WATER
☐	TSP SOLUTION
☒	ALCONOX SOLUTION
☐	NONE
☐	
☐	

[illegible]

Sampler's Initials *JWW*

LOW FLOW SAMPLING LOG (PERISTALTIC PUMP)
Credere Associates, LLC, 776 Main Street, Westbrook, ME 04092



PROJECT NAME: Gould Island HTRW 2022

DATE: 7/26/22

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

SAMPLE LOCATION ID: 120Bmw2 (120Bmw20)

FINAL MONITORING PARAMETERS AFTER SAMPLING

TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)
1430	9.6	0.4856	5.86	137.5	0.64	12.6	100	815.1

SAMPLE DATA:

SAMPLE BOTTLE ID		PRESERVATION	SAMPLE CONTAINER		LABORATORY ANALYSIS
TIME	LOCATION	METHOD	#	TYPE	
1120	120Bmw2	HCL	4	40 mL VOA	VOC
↓	↓	HCL	4	40 mL VOA	VPH
↓	↓	HCL	2	1 L Amber	EPH
↓	↓	None	2	1 L Amber	PAHs w/ SIM
plus 120Bmw20					

PURGE DATA

☐ 0.04 GAL/FT (1" DIAM.) x length of water column = 3.84

☒ 0.16 GAL/FT (2" DIAM.)

☐ 0.65 GAL/FT (4" DIAM.) Total Well Volume: 0.61 gallons

☐ 1.47 GAL/FT (6" DIAM.) Total Purge Volume: 0.75 gallons

of well volumes: 0.41

COMMENTS Several recharges required to fill bottles.

120Bmw20 duplicate collected.

DETAILED STABILIZATION CRITERIA

pH: ±0.1 standard units
 Temperature: ± 3%
 ORP: ±10 mV
 DO: less than 0.5 mg/L or ±10% for values greater than 0.5 mg/L
 Specific conductivity: ± 3%
 Turbidity: <5 NTU or 10% for reading >5 NTU (filtered only)
 Drawdown: no more than 0.3 feet

SAMPLER INFORMATION

Name (printed): Nate Weiss Signature: [Signature]

DATE: 4/26/22

LOCATION ACTIVITY

START: 1356
END: 1440

WELL DEPTH (ft):	<u>38.96</u>	☒ MEASURED	☒ TOP OF WELL	WATER LEVEL EQUIPMENT USED:
		☒ HISTORICAL	☐ TOP OF CASING	☒ ELECT. COND. PROBE
WATER DEPTH (ft):	<u>18.88</u>	☒ MEASURED	☐ FROM GRADE	☐ FLOAT ACTIVATED PROBE
		☐ HISTORICAL	☐ _____	☐ PRESSURE TRANSDUCER

WELL MATERIAL:	WELL	PROTECTIVE CASING	CONCRETE COLLAR	PVC or CASING
☒ PVC	LOCKED:	SECURE:	INTACT:	HEAVING?:
☐ SS	☒ YES	☒ YES	☒ YES ☐ NA	☐ YES ☐ NA
☐ _____	☐ NO	☐ NO	☐ NO	☒ NO

PURGING SAMPLING

☒	☒	Peristaltic Pump
☐	☐	Submersible
☐	☐	Bladder pump
☐	☐	Hand pump
☐	☐	Dedicated HDPE
☐	☐	New HDPE
☒	☒	Dedicated Teflon Lined LDPE
☐	☐	New Teflon Lined LDPE
☐	☐	Filter (0.45 micron)

Geopump peristaltic pump
Water Level Meter: SKINNY Dipper.
YSI Glucose Sonde with 150 mL flow cell
YSI Sonde SN: 21ml 00503
YSI Pro+ Handset
YSI Handset SN: 17E10049
Hach 2100 Turbidity Meter
Turbidity Meter SN: 20720 D002142
Sampler: late Weiss

FLUIDS USED:

☐	DISTILLED WATER
☒	DEIONIZED WATER
☐	POTABLE WATER
☐	TSP SOLUTION
☒	ALCONOX SOLUTION
☐	NONE

FIELD ANALYSIS DATA:									
TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)	Comments/Flow Rate (Indicate stable flow rate)
1407								18.88	pump on. pump on
1430								19.18	
1433								19.42	
1438	10.6	0.5109	11.95	53.1	1.81	28.7	100	19.75	
1443	10.7	0.4912	12.48	-24.2	0.72	19.8	100	20.08	
1448	10.7	0.3774	12.45	-42.6	0.64	22.2	100	20.73	
	Well will not be able to be pumped								
	If it continues to drop. Very little recharge								
1455									Sampled no purge.
5 min	3%	3%	±0.1	±10	<0.5 or 10%	<5	100-400 mL/min	>0.3 ft drawdown	

Page 1 of 2

LOW FLOW SAMPLING LOG (PERISTALTIC PUMP)
Credere Associates, LLC, 776 Main Street, Westbrook, ME 04092



PROJECT NAME: Gould Island HTRW 2022

DATE: 1/26/22

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

SAMPLE LOCATION ID: BRWW4

FINAL MONITORING PARAMETERS AFTER SAMPLING

TIME	TEMP (°C)	SP. COND. (mS/cm)	pH	ORP (mV)	D.O. (mg/l)	TURBID. (ntu)	Flow Rate (mL/min)	DTW (ft)
1626	11.1	8.2260	12.19	11.3	2.01	23.0	100	23.42

SAMPLE DATA:

SAMPLE BOTTLE ID		PRESERVATION	SAMPLE CONTAINER		LABORATORY
TIME	LOCATION	METHOD	#	TYPE	ANALYSIS
1455	BRWW4	HCL	6	40 mL VOA	VOC
		HCL	6	40 mL VOA	VPH
		HCL	3	1 L Amber	EPH
		None	3	1 L Amber	PAHs w/ SIM

PURGE DATA

☐ 0.04 GAL/FT (1" DIAM.) x length of water column = 20.08

☒ 0.16 GAL/FT (2" DIAM.)

☐ 0.65 GAL/FT (4" DIAM.) Total Well Volume: 3.213 gallons

☐ 1.47 GAL/FT (6" DIAM.) Total Purge Volume: 0.216 gallons

of well volumes: 0.07

COMMENTS

DETAILED STABILIZATION CRITERIA

pH: ±0.1 standard units
 Temperature: ± 3%
 ORP: ±10 mV
 DO: less than 0.5 mg/L or ±10% for values greater than 0.5 mg/L
 Specific conductivity: ± 3%
 Turbidity: <5 NTU or 10% for reading >5 NTU (filtered only)
 Drawdown: no more than 0.3 feet

SAMPLER INFORMATION

Name (printed): Nate Weiss Signature: [Signature]

INSTRUMENT CALIBRATION LOG
Credere Associates. LLC. 776 Main Street. Westbrook. ME 04092



PROJECT NAME: Gould Island HTRW 2022

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

WEATHER: 48°F overcast. chance PM precip.
(barometric pressure, temperature, precipitation)

WATER QUALITY INSTRUMENT SONDE MODEL/SN: YSI 21M100503

WATER QUALITY INSTRUMENT HANDSET MODEL/SN: YSI 17E100949

TURBIDITY METER MODEL/SN: Hach 2100Q/ 201200002142

FIELD STAFF ASSIGNED TO EQUIPMENT: Nate Weiss

DATE: 4/26/22

Temperature
 Temp Probe Reading 10.2
 Bulb Thermometer Reading 10.3

pH 3 POINT CALIBRATION

pH 4 solution #: K329-28 pH 7 solution #: L207-13 pH 10 solution #: L209-07
 Expiration: 12/3/22 Expiration: 8/3/22 Expiration: 2/3/22

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
pH 4 calibration	<u>3.98</u>	<u>4.01</u>	<u>4.01</u>		
pH 7 calibration	<u>6.97</u>	<u>7.01</u>	<u>7.09</u>		
pH 10 calibration	<u>9.98</u>	<u>10.02</u>	<u>9.99</u>		

CONDUCTIVITY CALIBRATION

Conductivity solution #: 21250049 Expiration: 7/12/22

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
Conduc. Calibration	<u>1.37</u>	<u>1.416</u>	<u>1.408</u>		

DO Calibration

Morning Evening
 Barometric Pressure (mm Hg): 767.0 Barometric Pressure (mmHg): 762.5 Zero DO solution #: 18282722
 Calibration value*: 100.875 Calibration value*: 100.3125 Expiration: 6/23

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
DO Calibration	<u>99.1</u>	<u>100.7</u>	<u>99.1</u>		
Zero DO Check	<u>0.00</u>	<u>NA</u>	<u>0.00</u>	<u>NA</u>	

ORP Calibration

Morning Evening
 ORP solution #: 19360107 Solution temperature: 10.3 Solution temperature: 11.3
 Expiration: 8/24 Adjusted zobell reading*: 250.11 Adjusted zobell reading*: 28248.81

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
ORP Calibration	<u>249.3</u>	<u>250.2</u>	<u>248.4</u>		

TURBIDITY CHECK

	Morning		Evening Check		Comment
	before	after (if needed)	before	after (if needed)	
10 NTU check	<u>10.1</u>	<u>10.3</u>			
20 NTU check	<u>19.8</u>	<u>19.9</u>			
100 NTU check	<u>98</u>	<u>96</u>			
800 NTU check	<u>747</u>	<u>778</u>			

CALIBRATOR SIGNATURE

Nate Weiss

* see second page
 attachment for
 adjustment tables

INSTRUMENT CALIBRATION LOG
Credere Associates. LLC. 776 Main Street. Westbrook. ME 04092



PROJECT NAME: Gould Island HTRW 2022

PROJECT NUMBER: Credere PO 16001327, FUDS Contract W912WJ-16-D-007

WEATHER: 76.9 OVERCAST 46-45' NO PRECIP
(barometric pressure, temperature, precipitation)

WATER QUALITY INSTRUMENT SONDE MODEL/SN: YSI - 1422

WATER QUALITY INSTRUMENT HANDSET MODEL/SN: YSI 556 / 15A101441

TURBIDITY METER MODEL/SN: Hach 2100Q/ 15030604650

FIELD STAFF ASSIGNED TO EQUIPMENT: S. TOWN

DATE: 4/26/22

Temperature
 Temp Probe Reading 10.2
 Bulb Thermometer Reading 10.1

pH 3 POINT CALIBRATION

pH 4 solution #: K 324 - 28 pH 7 solution #: L 207 - 13 pH 10 solution #: L 209 - 07
 Expiration: 12/3/22 Expiration: 8/3/22 Expiration: 8/3/22

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
pH 4 calibration	<u>4.04</u>	<u>4.00</u>	<u>3.98</u>		
pH 7 calibration	<u>7.19</u>	<u>7.00</u>	<u>7.01</u>		
pH 10 calibration	<u>10.00</u>	<u>10.00</u>	<u>10.01</u>		

CONDUCTIVITY CALIBRATION

Conductivity solution #: 21250049 Expiration: 7/22

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
Conduc. Calibration	<u>1.446</u>	<u>1.413</u>	<u>1.412</u>		

DO Calibration

Morning Evening
 Barometric Pressure (mm Hg): 766.9 Barometric Pressure (mm Hg): 762.5 Zero DO solution #: _____

Calibration value*: _____ Calibration value*: 100.3 Expiration: _____

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
DO Calibration	<u>96.3</u>	<u>100.9</u>	<u>103.8</u>		
Zero DO Check	<u>1.00</u>	<u>NA</u>	<u>0.5</u>	<u>NA</u>	

ORP Calibration

Morning Evening
 ORP solution #: 12360107 Solution temperature: 10.1 Solution temperature: 11.52

Expiration: 8/24 Adjusted zobell reading*: 250.5 Adjusted zobell reading*: 248.5

	Morning		Evening Check		Comment
	before	after	before	after (if needed)	
ORP Calibration	<u>250.6</u>	<u>250.1</u>	<u>248.4</u>		

TURBIDITY CHECK

	Morning		Evening Check		Comment
	before	after (if needed)	before	after (if needed)	
10 NTU check	<u>10.3</u>				
20 NTU check	<u>21.0</u>				
100 NTU check	<u>105</u>				
800 NTU check	<u>790</u>				

CALIBRATOR SIGNATURE

[Signature]

* see second page
 attachment for
 adjustment tables

APPENDIX E

DAILY QUALITY CONTROL REPORTS



**US Army Corps
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**Daily Quality Control Report
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island
FUDS No. D01RI033800
Contract W912WJ-19-D-0007
Task Order W912WJ-22-F-0041**

March 30, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0730*	1600
Kent Dresser	Dresser Marine	0830	1600
Tom Moysey	Dresser Marine	0800*	1600
Brian Tefft	Dresser Marine	0830	1600
Stephen Hammond	A&R Marine	0800*	1015
Carmen Inzitari	A&R Marine	0800*	1015

*Time onsite reflects time at Independence Park to load equipment onto A&R Marine vessel

Weather conditions:

35°F, clear, windy in the morning, calm in the afternoon.

Work completed:

- A&R Marine:
 - Transported Credere van, golf cart, portapotty, and Dresser Marine skid steer with bucket and brush hog attachment to the island.
- Dresser Marine:
 - Cleared NED 11, NED 13, and NED 01.
 - Provided transport to and from Gould Island.
- Credere:
 - Preliminarily marked out borings at NED 01, 11, 13, 36, and 38 to advise clearing efforts.
 - Checked water levels of existing wells to be sampled:
 - 12OBMW1 = 14.30 feet below top of PVC
 - 12OBMW2 = 12.35 feet below top of PVC
 - BRMW4 = 18.89 feet below top of PVC

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses, work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (groundwater) wore nitrile gloves.

- All personnel performing clearing work donned hard hat and ear protection during operation of the brush hog
- All personnel boarding the Dresser Marine and A&R vessels donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on slips, trips, and falls; insects (ticks); PPE; contaminated environmental media; and COVID-19 awareness.
 - o Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.
- No health and safety-related incidents or corrective actions to report.
- No health and safety-related observations and deficiencies to report.

Laboratory Analytical Samples Collected

- No samples for laboratory analysis were collected today.

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work will not be performed tomorrow (3/31) or Friday (4/1) due to weather concerns and a Dresser Marine personnel testing positive for COVID.
- Work will resume on Monday (4/4) with mobilization of the drill rig to the Site and commencement of soil boring advancement.

Report prepared by Samantha Foote, Credere – Field QC Manager
Report reviewed by Peter Thompson, Credere – Project Manager

Daily Quality Control Report

HTRW 2022

Gould Island, Narragansett Bay, Jamestown, Rhode Island

March 30, 2022

Attachment A
Photo Log

**Attachment A – Photo Log
March 30, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island**



1. View of equipment being loaded at Independence Park



2. View of cleared path to 11OBMW1 location

Attachment A – Photo Log
March 30, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



3. View of cleared path to 11OBMW2 location



4. View of cleared path to NED 13

Attachment A – Photo Log
March 30, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



5. View of cleared path to NED 01



6. View of cleared path for ISM sampling in NED 01

Daily Quality Control Report

HTRW 2022

Gould Island, Narragansett Bay, Jamestown, Rhode Island

March 30, 2022

Attachment B
Health and Safety Acknowledgement Form

Gould Island, Narragansett Bay, Jamestown, Rhode Island

[illegible]

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credere SSHO if any questions.



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**Daily Quality Control Report
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island
FUDS No. D01RI033800
Contract W912WJ-19-D-0007
Task Order W912WJ-22-F-0041**

April 4, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0745	15.45
Moirra Wentworth	Credere Associates, LLC	0745	1545
Kent Dresser	Dresser Marine	0745	1545
Peter Alaire	Dresser Marine	0745	1545
Patrick Hannon	Dresser Marine	0745	1545
Maynor Mandoza	A&R Marine	0800*	1500

*Time onsite reflects time at Independence Park to load equipment onto A&R Marine vessel

Weather conditions:

45°F in the morning, 55°F in the afternoon, clear, northwest wind at 13 mph to start the day, calmed down by afternoon.

Work completed:

- A&R Marine:
 - Transported New England Geotech drill rig and support truck as well as new skid steer for Dresser Marine to the island.
- Dresser Marine:
 - Cleared NED 01 and 10.
 - Provided transport to and from Gould Island.
- Credere:
 - Completed drilling program at NED 13 and 50.
 - Completed surface soil sampling program at NED 12.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses, work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (soil) wore nitrile gloves.
- All personnel working around the drill rig donned hard hat and ear protection during operation of geoprobe.
- All personnel performing clearing work donned hard hat and ear protection during operation of the brush hog.

- All personnel boarding the Dresser Marine and A&R vessels donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on goose awareness and operating near the brush hog.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.
- No health and safety-related incidents or corrective actions to report.
- No health and safety-related observations and deficiencies to report.

Laboratory Analytical Samples Collected

- Credere collected the following samples for laboratory analysis:

▪ 13SB11-1	▪ 50ASB1-1	▪ 12SS-6
▪ 13SB12-1	▪ 50ASB2-1	▪ 12SS-7
▪ 13SB13-1	▪ 50ASB3-1	▪ 12SS-8
▪ 13SB14-1	▪ 50ASB4-1	
▪ 13SB15-1		

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work will continue tomorrow (April 5) with well installation in NED 11 and boring advancement in NED 01.
- Brent Smith and Michael Kulbersh of USACE will be onsite to oversee well installation at NED 11.

Report prepared by Samantha Foote, Credere – Field QC Manager

Report reviewed by Peter Thompson, Credere – Project Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 4, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



1. View of A&R Marine delivering drill rig, support truck, and skid steer



2. View of angled borings at NED 50

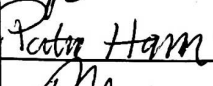
Attachment A – Photo Log
April 4, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



3. View of boring advancement at NED 13

Attachment B
Health and Safety Acknowledgement Form

Form A
Health and Safety & COVID-19 Acknowledgement Form
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island

Print Name	Signature	Organization	COVID Fully Vaccinated? (Y/N)	COVID Screening - See Questions Below (Y/N)	Date
Samantha Fox		Credera	Y	N	4/4/22
Nicola Wernicke		Credera	Y	N	4/4/22
Kent Dresser		Dresser	Y	Y	4/4/22
Patrick Hannon		DM	Y	N	4/4/22
Peter Alarce		DM	Y	N	4/4/22
Hypnora Mendoza		N.E. Geotech	Y	N	4/04/2022

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credera SSHO if any questions.

and/or compliance w/
current CDC protocols



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**Daily Quality Control Report
HTRW 2022**

Gould Island, Narragansett Bay, Jamestown, Rhode Island

FUDS No. D01RI033800

Contract W912WJ-19-D-0007

Task Order W912WJ-22-F-0041

April 5, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0750	1550
Moirá Wentworth	Credere Associates, LLC	0750	1550
Kent Dresser	Dresser Marine	0750	1550
Brian Tefft	Dresser Marine	0750	1550
Patrick Hannon	Dresser Marine	0750	1550
Maynor Mandoza	New England Geotech	0750	1550
Brent Smith	USACE	0820	1210
Michael Kulbersh	USACE	0820	1210

Weather conditions:

45°F in the morning, 55°F in the afternoon, clear, low wind.

Work completed:

- Dresser Marine:
 - Cleared NED 10 and 38.
 - Provided transport to and from Gould Island.
- Credere:
 - Completed drilling program and well installation at NED 11.
 - Completed 3 of the 5 borings at NED 01.
Boring 01SB14R was advanced ~2 feet northwest of the original boring location (original location indicated by pin flag still present); however, elevated PID readings at 5 feet bgs were not encountered as expected.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses, work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (soil) wore nitrile gloves.
- All personnel working around the drill rig donned hard hat and ear protection during operation of geoprobe.
- All personnel performing clearing work donned hard hat and ear protection during operation of the brush hog.

- All personnel boarding the Dresser Marine vessel donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on vehicle safety and emergency response.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.
- No health and safety-related incidents or corrective actions to report.
- The following health and safety-related observations and deficiencies were noted by USACE (Brent Smith and Michael Kulbersh):
 - First aid kit: The first aid kit was located at the paint shed. B. Smith noted it would be more useful in the van as the van is present at work locations. First aid kit was subsequently moved to the van.
 - Eye wash station: A portable eyewash station is not currently onsite. DI water is available in the paint shed which can be poured into effected eyes. Nate Weiss of Credere will bring portable eye wash station onsite on Thursday (4/7).
 - Emergency Phone Numbers: A sheet detailing relevant emergency numbers (hospital, coast guard, police, fire) was taped in the paint shed. B. Smith noted it would be useful to have a copy in the van. B. Smith provided his copy for Credere to keep in the van.

Laboratory Analytical Samples Collected

- Credere collected the following samples for laboratory analysis:

▪ 01SB14R-1	▪ 01SB16-1	▪ 01SB17-1
▪ 01SB14R-10	▪ 01SB16-2	▪ 01SB17-2
▪ 01SB14R-2	▪ 01SB16-20	

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work will continue tomorrow (4/6) with well development at NED 11 and boring advancement in NED 01. New England Geotech will core through concrete foundation at NED 12 tomorrow as well.

Report prepared by Samantha Foote, Credere – Field QC Manager
Report reviewed by Peter Thompson, Credere – Project Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 5, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



1. View of boring advancement at 11SB1



2. View of New England Geotech extruding contents of last core for 11SB1

Attachment A – Photo Log
April 5, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



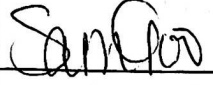
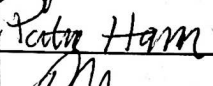
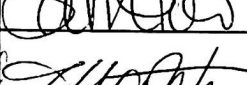
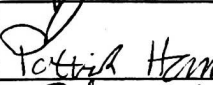
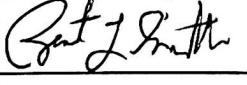
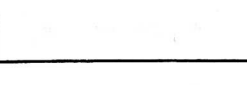
3. View of boring advancement at 11SB2



4. View of boring advancement at NED 01

Attachment B
Health and Safety Acknowledgement Form

Form A
Health and Safety & COVID-19 Acknowledgement Form
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island

Print Name	Signature	Organization	COVID Fully Vaccinated? (Y/N)	COVID Screening - See Questions Below (Y/N)	Date
Samantha Foxe		Credeere	Y	N	4/4/22
Morral Wenhurst		Credeere	Y	N	4/4/22
Kent Dresser		Dresser	Y	Y	4/4/22
Patrick Hannan		DM	Y	N	4/4/22
Peter Alarce		DM	Y	N	4/4/22
Thynor Dendora		N.E. Groton	Y	N	4/04/2022
Samantha Foxe		Credeere	Y	N	4/5/22
Morral Wenhurst		Credeere	Y	N	4/5/22
Brian C. Telfer		DM	Y	N	4/5/22
Thynor Dendora		N.E. Groton	Y	N	4/5/2022
Kent Dresser		Dresser Marine	Y	Y	4/5/22
Patrick Hannan		DM	Y	N	4/5/22
Brent Smith		USACE	Y	N	4/5/22
Michael Keiser		USACE	Y	N	4/5/22

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credeere SSHO if any questions.

and/or compliance w/
current CDC protocols



US Army Corps
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Daily Quality Control Report HTRW 2022

Gould Island, Narragansett Bay, Jamestown, Rhode Island

FUDS No. D01RI033800

Contract W912WJ-19-D-0007

Task Order W912WJ-22-F-0041

April 6, 2022

Personnel onsite

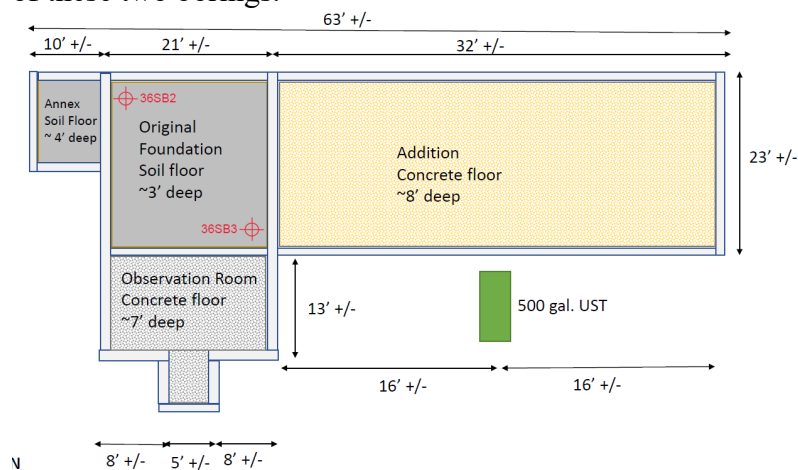
Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0800	1430
Moirá Wentworth	Credere Associates, LLC	0800	1430
Patrick Hannon	Dresser Marine	0800	1430
Maynor Mandoza	New England Geotech	0800	1430
Hayes Reubijas	New England Geotech	0800	1430

Weather conditions:

45°F all day, consistent rain all day, low wind.

Work completed:

- Dresser Marine:
 - Cleared a portion of NED 38.
 - Provided transport to and from Gould Island.
- Credere:
 - Completed drilling program at NED 01, 36, and 38.
The two borings located at NED 36 (36SB2 and 36SB3) were adjusted slightly to be within the portion of the Degaussing Building basement with an earthen floor. The two other basement areas were backfilled with a concrete floor; therefore, boring advancement would not be feasible. See figure below indicating the location of these two borings.



Degaussing Bldg. Basement/Foundation

- Cored through concrete foundation at NED 12 in preparation for tomorrow.
- Unable to develop wells at NED 11 due to heavy rainfall making it unsafe to use marine battery for whale pumps.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses, work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (soil) wore nitrile gloves.
- All personnel working around the drill rig donned hard hat and ear protection during operation of geoprobe.
- All personnel performing clearing work donned hard hat and ear protection during operation of the brush hog.
- All personnel boarding the Dresser Marine vessel donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on inclement weather.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.
- No health and safety-related incidents or corrective actions to report.
- No health and safety-related observations and deficiencies to report.

Laboratory Analytical Samples Collected

- Credere collected the following samples for laboratory analysis:

▪ 01SB18-1	▪ 38SB1-1	▪ 38SB5-1
▪ 01SB18-2	▪ 38SB2-1	▪ 38SB6-1
▪ 01SB19-1	▪ 38SB3-1	▪ 38SB7-1
▪ 01AB19-2	▪ 38SB4-1	▪ 38SB8-1
▪ 36SB2-1	▪ 38SB4-10	▪ 38SB8-10
▪ 36SB3-1		

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work will continue tomorrow (4/7) with well development at NED 11 and boring advancement in NED 12. This will complete the drilling program at Gould under the current scope of work. DiPrete Engineering will also be out tomorrow to begin survey work.

Report prepared by Samantha Foote, Credere – Field QC Manager
Report reviewed by Peter Thompson, Credere – Project Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 6, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



1. View of boring advancement at NED 01



2. View of boring advancement at NED 36

Attachment A – Photo Log
April 6, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



3. View of boring advancement at NED 38



4. View of concrete coring activities at NED 12

Attachment B
Health and Safety Acknowledgement Form

Gould Island, Narragansett Bay, Jamestown, Rhode Island

[illegible]

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credere SSHO if any questions.



**US Army Corps
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**Daily Quality Control Report
HTRW 2022**

Gould Island, Narragansett Bay, Jamestown, Rhode Island

FUDS No. D01RI033800

Contract W912WJ-19-D-0007

Task Order W912WJ-22-F-0041

April 7, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0800	1600
Moirra Wentworth	Credere Associates, LLC	0800	1600
Nate Weiss	Credere Associates, LLC	0800	1600
Patrick Hannon	Dresser Marine	0800	1600
Kent Dresser	Dresser Marine	0800	1600
Maynor Mendoza	New England Geotech	0800	1330
Gabriel Lopez	DiPrete Engineering	0900	1600
Tony Silva	USACE	0900	1140

Weather conditions:

45°F all day, cloudy, low wind.

Work completed:

- Dresser Marine:
 - Cleared a portion of NED 10 and 38.
 - Provided transport to and from Gould Island.
- Credere:
 - Completed drilling program at NED 12.
 - The volume of pit sludge at 12SB8 was not enough to collect the duplicate sample there as intended. Given the presence of slightly elevated PID readings in the rest of the soil core, the duplicate was shifted to the second sample. 12SB8-10 was therefore changed to 12SB8-20.
 - Unexpected clinker contamination observed immediately beneath the concrete at 12SB10 and 12SB11. No petroleum contamination was noted in these borings; therefore, the sample locations were changed to one sample from the interval of clinker contamination and the second sample from the groundwater interface.
 - Began developing wells in NED 11. Slow recharge inhibited development.
 - Completed ISM program at NED 01.
 - Began ISM program at NED 38.
- DiPrete Engineering:
 - Began collecting survey elevation data.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses and work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (soil) wore nitrile gloves.
- All personnel working around the drill rig donned hard hat, ear protection, and safety glasses during operation of geoprobe.
- All personnel performing clearing work donned hard hat and ear protection during operation of the brush hog.
- All personnel boarding the Dresser Marine vessel donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on PPE.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.
- No health and safety-related incidents or corrective actions to report.
- The following health and safety-related observations and deficiencies were identified by T. Silva:
 - Safety Glasses: Credere personnel logging soil cores were not wearing safety glasses due to the distance from the geoprobe. During Brent Smith's visit on April 5, he asked if safety glasses were present and advised use if soil characterization occurred closer to the drill rig. Credere personnel incorrectly interpreted that to mean safety glasses were not warranted if logging was far enough away from the drill rig; however, Tony Silva indicated that safety glasses were warranted regardless of distance from the drill rig. Credere personnel donned safety glasses for the duration of soil core logging.

Laboratory Analytical Samples Collected

- Credere collected the following samples for laboratory analysis:

▪ 12SB8-1	▪ 12SB10-1	▪ 01DU2-1
▪ 12SB8-2	▪ 12SB10-2	▪ 01DU2-2
▪ 12SB8-20	▪ 12SB11-1	▪ 01DU2-3
▪ 12SB9-1	▪ 12SB11-2	▪ 38DU4-SU2
▪ 12SB9-2		▪ 38DU4-SU4

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work will continue tomorrow (4/8) with well development at NED 11 and ISM sample collection at NED 38, 50, and 13. Credere will also attempt to collect the outfall samples tomorrow. New England Geotech will demob from the Site.

Daily Quality Control Report

HTRW 2022

Gould Island, Narragansett Bay, Jamestown, Rhode Island

April 7, 2022

Report prepared by Samantha Foote, Credere – Field QC Manager

Report reviewed by Peter Thompson, Credere – Project Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 7, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



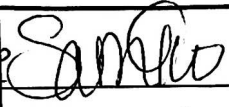
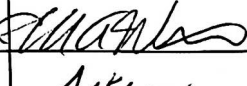
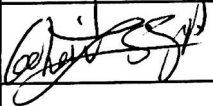
1. View of boring advancement at NED 12



2. View of ISM sampling at NED 38

Attachment B
Health and Safety Acknowledgement Form

Form A
Health and Safety & COVID-19 Acknowledgement Form
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island

Print Name	Signature	Organization	COVID Fully Vaccinated? (Y/N)	COVID Screening - See Questions Below (Y/N)	Date
Samantha Foxe		Credere	Y	N	4/6/22
Nora Wenholtz		Credere	Y	N	4/6/22
PATRICK HARRIS	Patrick Harris	DM	Y	N	4/6/22
Hayes Roubjick		NEGT	N	N	4/6/22
Waynor Wondora		N.E. Grothman	Y	N	4/6/2022
Samantha Foxe		Credere	Y	N	4/7/22
Nora Wenholtz		Credere	Y	N	4/7/22
Nate Weiss		Credere	Y	N	4/7/22
PATRICK HARRIS	Patrick Harris	DM	Y	N	4/7/22
Waynor Wondora		N.E. Grothman	Y	N	4/7/2022
Ken F. Desser		Dusser Marie	X	Y	4/7/22
Tony Silva		USACE	Y	N	4/7/22
GABRIEL LOPEZ		DIPRETE ENG.	Y	N	4/7/22

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credere SSSH if any questions.

or compliance w/ current
CDC protocols



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**Daily Quality Control Report
HTRW 2022**

Gould Island, Narragansett Bay, Jamestown, Rhode Island

FUDS No. D01RI033800

Contract W912WJ-19-D-0007

Task Order W912WJ-22-F-0041

April 8, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0800	1430
Nate Weiss	Credere Associates, LLC	0800	1430
Patrick Hannon	Dresser Marine	0800	1430
Hayes Reiubijas	New England Geotech	0800	0850
Gabriel Lopez	DiPrete Engineering	0800	1430

Weather conditions:

40°F and drizzly in the morning, 50°F and sunny in the afternoon.

Work completed:

- Dresser Marine:
 - Provided transport to and from Gould Island.
- Credere:
 - Continued well development in NED 11. Slow recharge inhibited development.
 - Completed ISM program at NED 38, 13, and 50.
 - Began outfall sampling.
- DiPrete Engineering:
 - Continued collecting survey elevation data.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses and work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (soil and groundwater) wore nitrile gloves.
- All personnel boarding the Dresser Marine vessel donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on working near the ocean.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.

- No health and safety-related incidents or corrective actions to report.
- No health and safety-related observations and deficiencies to report.

Laboratory Analytical Samples Collected

- Credere collected the following samples for laboratory analysis:
 - 38DU4-SU1
 - 38DU4-SU3
 - 50DU1-1
 - 50DU1-2
 - 50DU1-3
 - 13DU1-1
 - 13DU1-2
 - 13DU1-3
 - 13DU2-1
 - 13DU2-2
 - 13DU2-3
 - OF-9
 - OF-10
 - OF-15

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work will continue next week with finishing survey, ISM sampling at NED 10 and outfall sampling on the east side of the island on Monday (4/11).
- Equipment will be demobilized on Friday (4/15) when equipment operator is available. This equipment consists of skid steer, van and portable restroom facilities. Credere will be present for demobilization.

Report prepared by Samantha Foote, Credere – Field QC Manager

Report reviewed by Peter Thompson, Credere – Project Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 8, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



1. View of submerged sample location of OF-11



2. View of submerged sample location of OF-13

Attachment A – Photo Log
April 8, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



3. View of OF-15 sample location



4. View of OF-10 sample location

Attachment A – Photo Log
April 8, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



5. View of OF-9 sample location



6. View of ISM sampling at NED 50

Attachment B
Health and Safety Acknowledgement Form

4

[illegible]

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credere SSHO if any questions.



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**Daily Quality Control Report
HTRW 2022**

Gould Island, Narragansett Bay, Jamestown, Rhode Island

FUDS No. D01RI033800

Contract W912WJ-19-D-0007

Task Order W912WJ-22-F-0041

April 11, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Samantha Foote	Credere Associates, LLC	0745	1300
Nate Weiss	Credere Associates, LLC	0745	1300
Gabriel Lopez	DiPrete Engineering	0745	1210
Luigi Reineri	DiPrete Engineering	0745	1210

Weather conditions:

40-50°F and sunny. Winds 12 mph in the morning, calmed down by afternoon

Work completed:

- Dresser Marine:
 - Provided transport to and from Gould Island.
 - Assisted Credere will access to eastern side of the island for outfall sampling.
- Credere:
 - Completed ISM program at NED 10.
 - Completed outfall sampling program.
- DiPrete Engineering:
 - Completed collecting survey elevation data.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses and work gloves (as needed), and high visibility vests.
- Credere personnel working with potentially contaminated environmental media (soil) wore nitrile gloves.
- All personnel boarding the Dresser Marine vessel donned lifejacket (provided and maintained by vessel operators) while on the boat.

Health and Safety Notes:

- Daily health and safety meeting conducted by Samantha Foote. Safety briefing focused on physical hazards.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.

- No health and safety-related incidents or corrective actions to report.
- No health and safety-related observations and deficiencies to report.

Laboratory Analytical Samples Collected

- Credere collected the following samples for laboratory analysis:
 - 10DU3-SU1
 - 10DU3-SU2
 - 10DU3-SU3
 - 10DU3-SU4
 - OF-11
 - OF-12
 - OF013
 - OF-14

Outfall samples were intentionally collected at low tide to have them exposed during sample collection; however, these sample locations were submerged. Therefore, the volatile sample was not able to be collected from the sidewall of the hand auger boring and were collected once the soil was placed in the stainless-steel bowl.

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- No work will occur on the island on Tuesday, Wednesday, and Thursday (4/12, 13, & 14).
- Equipment will be demobilized on Friday (4/15) when equipment operator is available. This equipment consists of skid steer, van, and portable restroom facilities. Credere will be present for demobilization.

Report prepared by Samantha Foote, Credere – Field QC Manager

Report reviewed by Peter Thompson, Credere – Project Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 11, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



1. View of ISM sampling at NED 10



2. View of OF-11 sample location

Attachment A – Photo Log
April 11, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



3. View of OF-12 sample location



4. View of OF-13 sample location

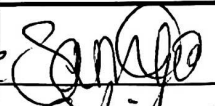
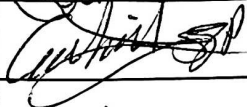
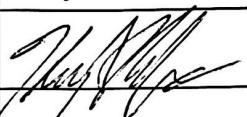
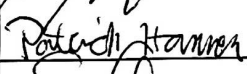
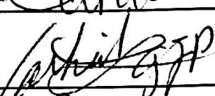
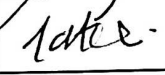
Attachment A – Photo Log
April 11, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



5. View of OF-14 sample location

Attachment B
Health and Safety Acknowledgement Form

Form A
Health and Safety & COVID-19 Acknowledgement Form
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island

Print Name	Signature	Organization	COVID Fully Vaccinated? (Y/N)	COVID Screening - See Questions Below (Y/N)	Date
Samantha Fort		Credera	Y	N	4/8/22
Cabrera Lopez		DIPRETE ENG	Y	N	4/8/22
Nate Weiss		Credera	Y	N	4/8/22
Hayes Phillips		MEGT	N	N	4/8/22
PATRICK HANNAH		DM	Y	N	4/8/22
Samantha Fort		Credera	Y	N	4/11/22
Cabrera Lopez		DIPRETE ENG	Y	N	4/11/22
Luigi Reineri		Diprete eng	N	N	04/11/22
Nate Weiss		Credera	Y	N	4/11/22

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credera SSHO if any questions.



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**Daily Quality Control Report
HTRW 2022**

Gould Island, Narragansett Bay, Jamestown, Rhode Island

FUDS No. D01RI033800

Contract W912WJ-19-D-0007

Task Order W912WJ-22-F-0041

April 26, 2022

Personnel onsite

Personnel	Company/Agency	Time Onsite	Time Offsite
Stacy Towne	Credere Associates, LLC	0745	1730
Nate Weiss	Credere Associates, LLC	0745	1730
Peter Thompson	Credere Associates, LLC	0745	1730
Tony Silva	USACE	0845	1130
Nick Noons	RIDEM	0845	1130
Jon Hulme	Jamestown	0845	1130
Steven Bois	Jamestown	0845	1130
Lisa Byer	Jamestown	0845	1130
Erin Arcand	Office of Senator Reed	0845	1130
Glenn Skalubinski	Jamestown	0845	1130
Ed Mello	Jamestown	0845	1130
Kent Dresser	Dresser Marine	1000	1315

Weather conditions:

48-54°F and overcast. Winds 8-18 mph SSE to E

Work completed:

- Dresser Marine:
 - Provided transport to and from Gould Island.
 - Assisted Credere remove Golf Cart end of day.
- Credere:
 - Synoptic groundwater elevation measurements, PID well mouth readings, and groundwater sampling
 - Measured Degaussing Building footprint from 38SB2
 - Attended USACE/Jamestown Site walk.

Personal protective equipment used:

- All Site workers used minimum Level D PPE, steel-toed boots, safety glasses and work gloves (as needed). High visibility safety vests waived.
- Credere personnel working with potentially contaminated environmental media (groundwater) wore nitrile gloves.
- All personnel boarding the Dresser Marine vessel donned lifejacket (provided and maintained by vessel operators) while on the boat.

- High visibility safety vests, steel toe boots, hard hats and safety glasses waived for site visitors since no equipment was being operated on island during their visit.

Health and Safety Notes:

- Daily health and safety meeting conducted by Stacy Towne. Safety briefing focused on physical hazards (slips, trips, falls, open utilities), potential for emerging ticks, nesting birds.
 - Supplemental safety briefing conducted by Dresser Marine, focusing on boat safety.
- No health and safety-related incidents or corrective actions to report.
- No health and safety-related observations and deficiencies to report.

Laboratory Analytical Samples Collected

- Credere collected the following groundwater samples and trip blanks / MSMSD for laboratory analysis:
 - 12OBMW1
 - 12OBMW2
 - 12OBMW20
 - 11OBMW1
 - 11OBMW2
 - BRMW4 (MS/MSD)
 - TB124-042622 (VOCs)
 - TB125-042622 (VPH)

Groundwater samples were all collected by no purge methods as stable groundwater drawdowns could not be maintained at lowest possible pumping rates.

Quality Control Notes:

- No quality control notes.

Summary Plan of Action:

- Work completed on-island
- Final equipment demobilized on Tuesday (4/26).

Report prepared by Peter Thompson, Credere – Project Manager
Report reviewed by Nate Weiss, Credere – Field QC Manager

Attachment A
Photo Log

Attachment A – Photo Log
April 24, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



1. View of cylinders relocated to NED Building 33 (Former Paint and Oil Storage)



2. Final view of island after demobilizing golf cart and equipment

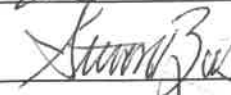
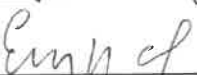
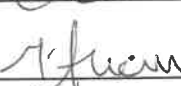
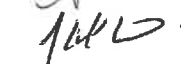
Attachment A – Photo Log
April 24, 2022
Gould Island HTRW 2022
Narragansett Bay, Jamestown, Rhode Island



3. View of transite panels under brush behind the former Fire Station

Attachment B
Health and Safety Acknowledgement Form

Form A
Health and Safety & COVID-19 Acknowledgement Form
HTRW 2022
Gould Island, Narragansett Bay, Jamestown, Rhode Island

Print Name	Signature	Organization	COVID Fully Vaccinated? (Y/N)	COVID Screening - See Questions Below (Y/N)	Date
Peter Thompson		Credere	N	N	4/26/21
Nick Norris		KIDEM	Y	N	4/26/21
Steven Bais		Jamestown RAB	Y	Y	4/26/22
Jon Hume		Jamestown RAB	Y	N	4/26/22
Lisa Bruer		Jamestown	Y	N	4/26/22
Emi Arcand		Sen. Reed's office	Y	N	4/26/22
Tony Silva		USACG	Y	N	4/26/22
A. Mollo		Jamestown	Y	N	4/26/22
Glen Silakubing		Jamestown	Y	N	4/26/22
Nate Weiss		Credere	Y	N	4/26/22
STACY TOWNE		CREDERE	Y	/	4/26/22

COVID Screening Questions:

1. Have you, or anyone whom you share a residence with, been in contact with any person suffering from Covid-19 in the last 10 days?
2. Do you have any fever or respiratory symptoms (e.g., cough, runny nose, sore throat, or shortness of breath)?
3. Have you visited any locations outside of the United States in the past 10 days?

* If your response to any of the above questions is 'Yes', a negative test result is required to work on Site. Please discuss with Credere SSHO if any questions.